The quality of therapeutic alliance in a parent-mediated intervention for autism

A thesis submitted to The University of Manchester for the degree of Doctor of Philosophy in the Faculty of Medical and Human Sciences

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PRELIMINARIES

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<tbody>
<tr>
<td>CBT</td>
<td>Cognitive Behavioural Therapy</td>
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<tr>
<td>FEQ</td>
<td>Family Engagement Questionnaire</td>
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<tr>
<td>GCSE</td>
<td>General Certificate of Secondary Education</td>
</tr>
<tr>
<td>ICC</td>
<td>Intra-Class Coefficient</td>
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<tr>
<td>IOC</td>
<td>Interpretation of Child – PPCS variable</td>
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<tr>
<td>KMO</td>
<td>Kaiser-Meyer-Olkin measure of sampling adequacy</td>
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<tr>
<td>MMR</td>
<td>Mumps, Measles and Rubella triple vaccine</td>
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<td>PACT</td>
<td>Pre School Autism Communication Trial</td>
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<tr>
<td>PAS</td>
<td>Parent Actions and Strategies - PPCS variable</td>
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<tr>
<td>PCA</td>
<td>Principal Components Analysis</td>
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<td>PSD</td>
<td>Parent Self Disclosures – PPCS variable</td>
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<td>RCT</td>
<td>Randomised Control Trial</td>
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<td>SES</td>
<td>Socio-Economic Status</td>
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<tr>
<td>TA</td>
<td>Thematic Analysis</td>
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<tr>
<td>TASC-P</td>
<td>Therapy Alliance Scale for Children - Parent</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>US</td>
<td>United States (of America)</td>
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<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
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<tr>
<td>WAI</td>
<td>Working Alliance Inventory</td>
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**University of Manchester:** Abstract of a thesis submitted in March 2015 by Carol A. Taylor for the degree of Doctor of Philosophy in the Faculty of Medical and Human Sciences.

**The quality of therapeutic alliance in a parent-mediated intervention for autism**

**Background:** Therapeutic alliance, a measure of the quality of the working relationship between client and therapist, has consistently been found to associate with outcomes across a range of therapies and client groups. Since interventions for young children are often delivered through parents, an understanding of factors influencing the quality of alliance with parents is important; despite this research into parent-therapist alliance has been limited. Qualitative reports suggest that the extent to which parent’s beliefs and perspectives are acknowledged influences how engaged they feel in therapy, an indication that this may be a specific factor in alliance with parents. This thesis investigates baseline and process variables associating with quality of parent-therapist alliance in a parent-mediated intervention for autism, including variables relating to parents’ causal beliefs and perspectives.

**Setting:** The research uses data collected during a RCT of a parent-mediated intervention for autism (PACT). The sample comprises 77 parents and 6 therapists.

**Method:** A sequential exploratory mixed methods approach, with an intermediary instrument development phase was employed. **Qualitative phase:** Thematic Analysis was used to explore a) parents’ beliefs about the cause of autism in their child and b) themes on which parents expressed their perspective in session, and the manner in which therapists responded.

**Instrument development phase:** The thematic network created in the qualitative analysis informed the development of the Parental Perspectives Coding Scheme (PPCS), a video based scheme for coding the quality of parent Expression and therapist Integration of parental perspectives in intervention sessions. **Quantitative phase:** Parent-therapist dialogue, for a sub-sample of 20 cases, was coded using the PPCS to create process variables for the Expression and Integration of parental perspectives. Baseline variables, available for the full sample of 77 cases, comprised demographic variables, parental dichotomous causal belief variables, and a therapist average fidelity variable. Initial analyses identified variables with significant univariate associations with alliance. These were included in separate multivariate models of parent-rated alliance and therapist-rated alliance.

**Results:** **Qualitative and Instrument development phases:** Thematic analysis created 5 overarching themes, which were merged into three items for the PPCS; Interpretation of the Child (IOC), Parent Actions and Strategies (PAS) and Parental Self Disclosures (PSD). Raters code each PPCS item for Expression i.e. the detail in which the parent expresses her perspective, and Integration i.e. the extent to which the therapist integrates the parent’s expressed perspective into the session. Item inter-rater reliabilities were satisfactory to good; distribution of scores indicated that the scheme was capable of differentiating sessions. **Quantitative phase:** Parent-rated and therapist-rated alliance did not correlate. PPCS Expression and Integration scores were higher in the high parent-rated alliance group but the difference was non-significant. Parents who cited MMR as a possible cause of their child’s autism rated the alliance significantly lower than those who did not. Parents with no post-16 qualifications rated the alliance significantly higher than those with higher qualifications. A multiple regression model including the two factors explained 18.3% of variance in parent-rated alliance. Therapist-rated alliance significantly correlated positively with therapist fidelity and with PPCS variables for parent Expression and therapist Integration. A hierarchical multiple regression model, (1 Fidelity, 2 Expression, 3 Integration) explained 58.8% of variance in therapist-rated alliance.

**Conclusions:** Therapists should be aware that parents may rate the alliance differently from themselves and that different factors associate with their ratings. Parents’ causal beliefs and level of education may influence their ratings of alliance in specific interventions.
Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.
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Acknowledgements

I would like to thank the PACT consortium for agreeing to me using data collected during the PACT trial for this research and to acknowledge my appreciation of, and respect for, the parents who participated in the PACT trial and the therapists I worked alongside.

My thanks are extended to Jenny Downing for undertaking the reliability coding during the development of the Parental Perspectives Coding Scheme and to Kate Toole for taking on the same task for the main study. I’m also very grateful to Dr. Richard Emsley for providing prompt and helpful statistical support at key points over the years.

Particular thanks are due to my supervisory team of Professor Jonathan Green, Professor Peter Callery and Dr Julie Marshall for keeping me going through the six years a part-time PhD takes. Their range of professional backgrounds and research experiences brought different angles to the study and enriched my thinking.

Finally heartfelt thanks to my family and friends for all their support and encouragement throughout.
Personal Statement

In 2006 I was working as an experienced speech and language therapist with a specialist community caseload including children with autistic spectrum disorders. For some time I had been interested in contributing to the evidence base for speech and language intervention through research and so welcomed the opportunity to take part, as a therapist, in a randomised control trial of a parent mediated intervention for children with autism, the Pre-School Autism Communication Trial (PACT; www.bbmh.manchester.ac.uk/pact). Using a sample of 152 children with autism, recruited from three UK sites, the PACT trial compared the effects of receiving the parent-mediated PACT intervention versus treatment as usual. The primary outcome was severity of autism symptoms, with secondary measures of parent-child interaction, child language and child adaptive functioning in school. The PACT intervention showed positive effects for parental synchrony with the child (1.22, 0.85-1.59) child initiations with the parent (0.41, 0.08-0.74) and parent-child shared attention (0.33, -0.02-0.68). Effects on severity of autism symptoms, child language and adaptive functioning were small (Green, Charman et al. 2010). The intervention and trial are described further in the main body of the thesis, sections 2.2 and 2.3.

The experience of being involved in a rigorous trial run by a highly experienced and respected group of researchers led me to consider doing a PhD myself. During the PACT trial I became very interested in how the relationship between me, as therapist, and the parents I was working with developed throughout the course of a parent-mediated intervention. Measures of therapeutic alliance, as rated by both parents and therapists, were taken throughout the PACT trial; in this way I was introduced to the concept of alliance as a measurable construct of the relationship between client and therapist, and learnt about its documented association with outcome across a range of treatments and client groups. Whilst the PACT consortium had long-term plans to investigate the alliance-outcome relationship within the trial, there were no plans to look at baseline and process factors that might associate with quality of alliance. Noting a gap in the literature for research into baseline and process factors associating specifically with quality of parent-therapist alliance, and following discussion with Prof. Jonathan Green, I approached the PACT consortium with a proposal for this PhD. I was given permission to use the PACT data for the study and encouragement to pursue my research. All the analyses within this thesis have been undertaken by myself and have not previously been carried out; at the time of thesis submission the PACT consortium had not yet undertaken any analyses of the alliance data.
My status as an intervention therapist on the trial has had a bearing on a number of aspects of the design and execution of this research. Within this thesis I have reflected on this and attempted to make clear steps taken to avoid any bias resulting from this.

I have undertaken this PhD part-time over six years, starting in 2009 when the PACT trial ended. Whilst completing my PhD I have also been privileged to work as a therapy supervisor on two further parent-mediated autism intervention trials: iBASIS, a pilot trial of a parent mediated treatment for infant siblings of children with autism (www.bbmh.manchester.ac.uk/ibasis) and PASS, an adaptation of the PACT intervention for lay health workers in India and Pakistan (www.bbmh.manchester.ac.uk/pact/PASS). This work has allowed me to observe working relationships in a large range of parent-therapist dyads during intervention. I am of the belief that the quality of the therapy relationship is an important ingredient in the success of therapy. There remains a need for researchers to further the evidence available to therapists to assist them in developing quality working alliances with parents.
Note on the Alternative Format

Permission has been obtained to present this thesis in the alternative format. The format is alternative in that the Results Section of the thesis (Section 3) is presented as a series of papers in a format suitable for publication. Guidelines state that it is not essential that papers have been submitted or published; the purpose is to allow the candidate to develop skills in writing papers in the style required for peer reviewed journals. The format also encourages early publication by reducing the conflict between writing up research for a thesis in the traditional format and preparing papers for submission.

In line with the requirements of the alternative format, the thesis includes overarching chapters, alongside the results papers, to create a coherent and in depth body of work. An introductory Chapter 1 sets the context for the thesis, presents a comprehensive literature review and develops the research questions. Chapter 2 details the research design and methodology employed. Results are presented in Chapter 3; three papers are presented alongside two additional sections detailing data analysis and results not incorporated in the papers. In Chapter 4 a comprehensive and integrated discussion of the findings reported in the results chapter is given. The guidelines for the alternative format recognise that there will necessarily be some overlap between the overarching chapters and the publication style papers, since the papers will include their own introduction, method and discussion sections.

The papers included in this thesis are ‘in preparation’. Author contributions are as follows:

**Paper 1**

Carol Taylor designed the study, extracted the data from the PACT database and carried out the qualitative and statistical analyses and interpretation. Dr Julie Marshall, Prof. Peter Callery and Prof Jonathan Green provided guidance on design, analysis, interpretation and writing in their capacity as supervisors.

**Paper 2**

Carol Taylor designed the study, conducted the qualitative analysis, developed and piloted the coding scheme, and carried out statistical analysis and interpretation. Prof. Peter Callery and
Dr. Julie Marshall contributed to the interpretation of the qualitative analysis and provided guidance on writing in their capacity as supervisors. Prof. Jonathan Green provided guidance on reliability analysis and writing.

**Paper 3**


Carol Taylor designed the study, carried out the video coding and data extraction, and conducted the statistical analyses and interpretation. Prof. Jonathan Green, Prof. Peter Callery and Dr. Julie Marshall provided guidance on the design, statistical analyses, interpretation and writing in their capacity as supervisors.
CHAPTER 1

INTRODUCTION
1.1 Background to the research

1.1.1 Context

For professionals working with young children with disabilities such as Autism, expert opinion is clear – collaboration with parents is vital. ‘The involvement of families in any therapeutic intervention is crucial’ (Le Couteur 2003). ‘Collaboration with the primary carers…in the context of the child's environment, culture and language is paramount’ (RCSLT 2005 p21). In the UK parents typically spend most time with their children, are often responsible for carrying out the advice given and have considerable influence mediating the development of children with disabilities. In acknowledgement of this interventionists have made moves away from the traditional professional-led models of direct child intervention to offering more indirect interventions through parents, within the context of collaborative family-centred services. In the field of autism, specific parent-training programmes have arisen from the understanding that parents have a key role to play in improving their child’s communication, e.g. the Hanen More than Words (Sussman 1999), N.A.S. EarlyBird (Shields 2001), JASPER (Kasari, Freeman et al. 2006) and PACT (Green, Charman et al. 2010) programmes.

Collaboration with parents can take place on a number of levels. Lindsay and Dockrell (2004) differentiate parental involvement in services for a child with disabilities into four levels; the micro-system level, where parents are directly involved in the implementation of their child’s intervention programs, the meso and exo systems where collaboration with parents can influence models of service delivery and implementation of policies, and the macro-system level where parents views can influence national laws and value systems. This research is interested in collaboration at the micro-system level, i.e. when parents are directly involved in the delivery of their child’s intervention. At this level the terms ‘collaboration’ or ‘parental engagement’ that are frequently used in the early intervention literature for childhood disability are conceptually close to the well-developed construct of the therapeutic (or working) alliance in psychiatry. The therapeutic alliance is a measure of the extent to which the therapist and the client are engaged and working together towards mutually acceptable goals within therapy sessions (Bordin 1979). Reliable and validated measures of the alliance have been developed over a number of years (Elvins and Green 2008) and the quality of alliance has been repeatedly positively associated with treatment outcome for adult and child clients (Martin, Garske et al. 2000, Shirk and Karver 2003, Horvath, Del Re et al. 2011, Shirk, Karver
et al. 2011). In addition there is a smaller body of work examining the antecedents of alliance i.e. the therapist and client attributes and techniques that are associated with high alliance during treatment. Although therapeutic alliance is now being used in a wider range of fields to examine the quality of the client-therapist relationship, for example in cardiac rehabilitation (Burns and Evon 2007), occupational therapy (Morrison and Smith 2013), oncology (Meystre, Bourquin et al. 2013), and lower back pain rehabilitation therapy (Hall, Ferreira et al. 2010), it has so far received little attention as a construct in early childhood disability intervention.

Since the majority of physical and mental health care for young children is mediated in some way through parents, there is a need within children’s services for more specific evidence on factors associated with high parent-therapist alliance. As an example, Pappas, McLeod et al. (2008), in a survey of 277 Australian speech and language therapists (SLTs), found significant differences in SLTs’ beliefs about the extent to which they should involve parents in intervention and their actual practice. As the authors suggest, this may be due to an ‘implementation gap’ in the transition from accepting new ideas to putting them into practice. However it is also true that there is little empirical evidence available on the antecedents of alliance to guide therapists in their practice. Additionally it has been suggested that there remains an underlying perception that time spent developing rapport and building the relationship might not be considered to be ‘real work’ (Hanna and Rodger 2002). Evidence on factors associated with high parent-therapist alliance and the impact of alliance on therapeutic effect may help guide therapists in building effective working relationships with parents in therapy.

1.1.2. Purpose of this study

The purpose of this study was to investigate factors associated with the quality of parent-therapist therapeutic alliance in a parent-mediated treatment for a chronic neuro-developmental disorder – namely autism. The study made use of existing original data on baseline variables and therapeutic alliance from the largest intervention trial for young children with autism undertaken to date, the Pre-School Autism Communication Trial, hereafter referred to as the PACT intervention (Green, Charman et al. 2010). For this research additional detailed process analysis of the first six sessions of therapy in trial intervention cases was conducted, with the overall aim of identifying the baseline and early session antecedents of therapeutic alliance.
1.1.3 Contribution of this study

To date, to the author’s knowledge, few studies have investigated parent-therapist alliance in parent mediated or parent training interventions. In the main these have focussed on the association between therapeutic alliance and outcome and as such there is little empirical evidence available on other factors associating with alliance with parents (Karver, Handelsman et al. 2005, Kazdin and Whitley 2006). This research contributes to this literature base by i) exploring the nature and course of alliance within a parent-mediated intervention and ii) investigating associations between alliance and a range of baseline and process factors, including factors related to parents’ beliefs and perspectives not previously studied. A better understanding of factors that are associated with high alliance may aid therapists in reflecting on their own relationships with parents in therapy. There is early evidence from psychiatry that therapists can improve the therapeutic alliances they make following specific training and feedback (Crits-Christoph, Connolly Gibbons et al. 2006, Hilsenroth and Cromer 2007, Smith-Hansen, Constantino et al. 2011).

1.1.4 Content and format of the introduction

The literature on therapeutic alliance is vast. An initial search was conducted at the start of the research using the OVID Medline(R) and PsycINFO databases, with the search terms therapeutic alliance/working alliance/alliance. Weekly alerts were set up with the same terms to ensure papers published during the course of the research were included. Titles and abstracts of articles returned were screened for relevance to the thesis research questions; those of interest were obtained and read in full. Particular focus and emphasis was placed on articles relating to the conceptualisations of alliance and its underlying components, overviews of the alliance-outcome relationship, articles specifically relating to alliance with parents and studies reporting on baseline and process factors associating with alliance in a range of client groups and therapies. Additionally reference lists and citations of relevant papers were inspected for any articles that may otherwise have been missed.

Alongside the therapeutic alliance literature, the research questions for this thesis were derived from a review of the literature on the beliefs and experiences of parents of children with autism and other disabilities/disorders, as these were predicted to potentially influence the quality of alliance in parent-mediated interventions. Searches were conducted using the same databases and methods as above, with search term ‘parents’ combined with other relevant terms (for example, ‘autism’, ‘intervention’, ‘speech and language therapy’, ‘disability’, ‘causal beliefs’, ‘mental health’). Again titles and abstracts were screened for relevance; particular
focus was placed on papers relating to parent’s causal beliefs, the effects of having a child with autism/other disabilities on parents, parent’s own experiences of parenting a child with autism and their experiences of intervention. Full papers for relevant articles were obtained and read and reference lists and citations inspected for further articles.

The introduction is organised as follows. Section 1.2 outlines the evolution and current conceptualisations of therapeutic alliance, relates the concept of alliance to the context of a communication based parent-mediated intervention and summarises the existing research on the significance of the parent–therapist alliance to outcome. Section 1.3 discusses the limited literature on antecedents to alliance, with particular reference to parents. Section 1.4 presents the evidence on factors that may influence a parent’s approach to a parent-mediated intervention and consequently their alliance with the therapist. This includes research pertaining to parental beliefs, attitudes and knowledge. Section 1.5 provides a summary from which the research questions are derived.
1.2 The Therapeutic Alliance

1.2.1 Historical overview

Therapeutic alliance is a measure of the extent to which the relationship established between a therapist and client in therapy allows them to work together towards mutually acceptable goals. As a concept therapeutic alliance has its roots firmly in the psychiatric and psychotherapeutic literature, developing from a belief in the importance of the relationship between the client and the therapist to psychotherapy outcome. In his historical review of the concept Horvath (2006) traces its early evolution from Freud’s 1913 writings on the relationship in therapy through to Rogers’ 1950’s writings on interpersonal skills. This early interest was revived by Bordin (1979) who attempted to more clearly define the concept for research use. Bordin defined alliance theoretically in terms of three aspects – agreement on goals, assignment of tasks and the development of emotional bonds. He drew on early evidence that alliance was an important factor in outcome to suggest that the effectiveness of all psychotherapies, regardless of their theoretical stance, is dependent, at least in part, on the strength of alliance formed between the therapist and the client.

Since then therapeutic alliance has become widely recognised as a potentially important variable in therapy and has been the subject of significant research interest, particularly in the field of adult psychiatry. This has been driven in part by the desire to highlight the contribution of relationship based factors to outcome at a time when empirically based treatments, with an emphasis on more prescriptive therapy techniques, had come to the fore (Safran and Muran 2006). The result has been a growing body of evidence showing a modest but significant association between alliance and outcome in both adult and, more recently, child and adolescent treatment. The most recent meta-analysis of adult studies, including 201 research studies both published and unpublished (i.e. doctoral dissertations), reported an overall aggregate relation between alliance and outcome of $r=.275$, with 95% confidence interval .25-.30 (Horvath, Del Re et al. 2011). Fluckiger, Del Re et al. (2012) summarise the findings of the various meta-analyses conducted over the years to conclude that, in adult studies, alliance explains approximately 7% of the variance in outcomes. Further they point out that although this is a modest figure it is higher than any other single variable so far researched. A meta-analysis of child and adolescent studies conducted using the same strict inclusion criteria as the Horvath analysis, yielded 16 studies and an overall weighted mean correlation of $r=.22$, 95% confidence interval quoted as +/- .06 (Shirk, Karver et al. 2011).
These estimates corroborate those found in earlier meta-analyses (Martin, Garske et al. 2000, Shirk and Karver 2003). The studies included in both analyses covered a range of different treatments and client groups and although Horvath reports great variability in the effect sizes both within and between treatments, moderator analyses found no significant change to the outcome correlation due to treatment type. Crits-Christoph, Gibbons et al. (2011) observe that the outcome relationship does not appear to be highly disorder specific, finding similar results for a pooled sample including a variety of disorders and treatments as for two separate samples for single disorders of depression and substance abuse.

One criticism of alliance-outcome research is that the direction of the association between alliance and outcome is methodologically difficult to establish; it could be that good outcome, reflected in early positive symptom change, causes good alliance rather than the other way round (Kazdin and Nock 2003, Crits-Christoph, Gibbons et al. 2006). However, studies that have attempted to control for early symptom change have still shown a relationship between alliance and outcome (Barber, Connolly et al. 2000, Klein, Schwartz et al. 2003, Baldwin, Wampold et al. 2007). Crits-Christoph, Gibbons et al. (2011) measured symptom change at the beginning, and alliance at the end, of 16 weekly therapy sessions for depression. They found that both for early therapy (sessions 3-9), and for all sessions combined, change in alliance predicted next session symptom change, but later in therapy only (sessions 10-16) reverse causation was also evident i.e. prior symptom change also significantly predicted alliance. This suggests that, although by the end of therapy prior symptom change can influence alliance ratings, quality of alliance early in treatment does play a part in determining final outcomes.

It has also been suggested that in some studies common-rater confounds, where both alliance and outcome were rated by the same person, may have inflated the alliance-outcome associations reported e.g. when both a client-rated alliance questionnaire and a client reported outcome measure have been used (Kazdin and Nock 2003, Green 2006). Horvath, Del Re et al. (2011) addressed this issue, which they refer to as a ‘halo effect’ in their meta-analysis. Aggregate effect size was calculated separately for studies with same source raters (N=94) and different source raters (N=96). Although the effect size was smaller for studies where alliance and outcome were assessed by different raters (r=.25) than for studies where the rater was the same (r=.29) the difference was not significant. However, Horvath cautions that variance in both samples was large, making it more difficult for contrasts to reach statistical significance, and notes that each time such comparisons have been made the results move closer to
significance. For rigorous research it is therefore better to ensure alliance and associating variables are measured by different raters.

Overall, the evidence for the alliance-outcome relationship appears to be robust and the consistent documented positive association between quality of alliance and outcome has ensured continued research interest in the concept.

### 1.2.2 Measuring therapeutic alliance

In reviewing the alliance literature it soon becomes apparent that, although there is broad agreement that the alliance describes the working relationship between therapist and client, there is no single agreed conceptualisation of alliance in psychiatry (Martin, Garske et al. 2000, Elvins and Green 2008). Conceptualisations vary around whether the alliance is considered to provide a facilitative context for therapy or to be an active ingredient, such that the experience of quality alliance with the therapist can be potentially curative in and of itself (Horvath 2006). They vary in the extent to which they consider the alliance to be a specific construct within the general relationship in therapy, or to encompass the whole relationship (Hatcher and Barends 2006, Karver, Handelsman et al. 2006). Hatcher and Barends for example, consider the alliance to consist only of those aspects of a relationship that contribute to the purposeful, collaborative work of therapy. Conceptualisations also vary in the extent to which techniques are considered to be totally separate from the alliance or to contribute to the alliance (Goldfried and Davila 2005). As a result a plethora of somewhat related definitions and measures exist. Elvins and Green (2008) list 31 measures developed between 1962 and 2007, all with slightly differing conceptual backgrounds and items. The need to unify around a common conceptualisation has been recognised within psychiatry as significant need for both clinical practice and research (Elvins and Green 2008).

Horvath, Del Re et al. (2011) further discuss this issue; studies included in their meta-analysis used 30 different alliance measures, not including different versions of the same instrument. In common with previous studies, versions of four main alliance measures were most commonly employed; CALPAS (California Psychotherapy Alliance Scales), WAI (Working Alliance Inventory), HAq (Helping Alliance Questionnaire) and the VPPS (Vanderbilt Psychotherapy Process Scale), but 54 of the 201 studies used lesser known and lesser validated measures. The problem here is that, with such a diverse range of measures in use, alliance is arguably being defined differently and individually in each study by the instrument employed, making comparison between studies difficult. Horvath notes that the shared variance of even
the 4 core measures listed above has been shown to be less than 50%. In child and adolescent research the diversity of measures employed with both parents and children/adolescents is also an issue. Shirk, Karver et al. (2011) report 10 different alliance measures employed in the 16 studies included in their meta-analysis, and observe that it is unclear whether they are actually all measuring the same thing. In the adult meta-analysis (Horvath, Del Re et al. 2011) variability in the alliance outcome correlation across the studies was 56% greater than would be expected if all the studies were measuring the same underlying concept. However, more positively, moderator analysis within the same meta-analysis found that the alliance measure used did not significantly moderate the alliance-outcome relationship; neither did the rater (i.e. therapist, client or observer). Thus despite their variability it seems that the different conceptualisations and measures are tapping into some common underlying concept of alliance, and that the relationship between quality of alliance, however measured, and outcome is robust.

1.2.3 Factor structures of alliance measures

Factor analyses of measures of alliance have also provided interesting information on conceptualisations and underlying dimensions of alliance. For example, as discussed above, the traditional theoretical view of alliance, proposed by Bordin (1979) and applied extensively since, is that alliance is made up of three related components, task, goal and bond. Much alliance research uses the total alliance score; however some studies of antecedents of alliance have explored associations with the different domains of alliance. Therapeutic alliance is a complex variable and associations which may be lost in analyses of the total alliance score can show significance when individual alliance domains are used e.g. Muran, Segal et al. (1994)’s study on the influence of clients’ pre-treatment personality found a negative association between the ‘hard to be submissive’ subscale of the Inventory of Interpersonal Problems (IPP) and the Goal Agreement subscale of the Working Alliance inventory (WAI) which was not evident when the Total Alliance score was analysed. Thus an understanding of the underlying structure of alliance within a study is important.

Alliance measures theoretically based on Bordin’s 3 factor conceptualisation e.g. the WAI (Working Alliance Inventory, Horvath and Greenberg (1989)) have been subjected to factor analyses using alliance data from a range of different client groups and treatments. Results have been contradictory. Although some studies of the WAI have confirmed the theoretical three factor solution e.g. Munder, Wilmers et al. (2010) for psychiatry outpatients and
inpatients, others have resulted in different solutions: single factor e.g. Corbiere, Bisson et al (2006) for case-manager client dyads and Corbella, Botella et al. (2011) for psychotherapy clients; 2 factor e.g. Ross, Polaschek et al. (2011) in rehabilitation with high risk violent offenders and Guedeney, Fermanian et al. (2005) in social work; 6 factors e.g. Bachelor (2013) in psychotherapy.

There is then evidence to suggest that, although the alliance-outcome relationship is robust across treatments and client groups, the underlying dimensions of alliance may manifest differently in different client groups and treatments. It is of both theoretical and practical interest therefore to determine the factor structure of alliance within a particular treatment before carrying out analyses. As an illustration, Andrusyna, Tang et al. (2001), investigating the underlying structure of the WAI using data from clients receiving cognitive behavioural therapy (CBT), found a 2 factor solution, comprising a Relationship factor and an Agreement/Confidence factor. This led them to suggest that in CBT the relationship between therapist and client may be largely independent of the client's agreement with and confidence in the therapist and in CBT as a treatment. This, they propose, necessitates independent measures of these two factors in CBT alliance research, rather than a single measure of a general alliance factor.
1.3 Client and therapist variables contributing to alliance formation

Research into variables contributing to the establishment of alliance has lagged significantly behind that involving the link between alliance and outcome. In addition what has been found has neither been integrated into alliance theory in a systematic way nor organised into a theoretical model of determining factors (Ackerman and Hilsenroth 2003, Karver, Handelsman et al. 2005, Karver, Handelsman et al. 2006). There exists instead a series of studies on individual factors, often with contradictory results, that make application of the literature to new studies challenging. The situation is further complicated by the variety of often overlapping terms and constructs used in the literature by different researchers for somewhat related variables. A review of 49 studies in youth and family therapy yielded 44 process constructs, many of which on inspection seemed to be the same but differently worded (Karver, Handelsman et al. 2006).

Research on factors associated with alliance initially focused mainly on pre-treatment or baseline characteristics of the client. Later studies however have demonstrated that client characteristics alone may not be as important as the early studies implied and that therapist characteristics and techniques contribute significantly. Baldwin, Wampold et al. (2007) investigated the relative contributions of therapist and client variability in alliance formation to outcome. Unlike previous studies they considered therapist variability in terms of both within-therapist and between-therapist effects. They found that between-therapists variability was related to outcome in so far as therapists who on average formed stronger alliances also achieved significantly better outcomes. However within-therapists the strength of alliance was not related to outcome, such that for a given therapist variability in alliance with individual clients was not important. Fluckiger, Del Re et al. (2012), in a meta-analysis testing for therapist effects, similarly suggest that therapist variability in alliance may be more significant than client variability. This is interesting in terms of alliance formation since the patient characteristics often cited as important to alliance formation might not easily be changed, whereas at least some of the therapist characteristics and techniques could be enhanced by giving them appropriate attention, along with training, feedback and supervision (Crits-Christoph, Connolly Gibbons et al. 2006, Crits-Christoph, Crits-Christoph et al. 2010, Smith-Hansen, Constantino et al. 2011). Baldwin, Wampold et al. (2007) suggest that some therapists
attribute poor alliance to patient characteristics, presumably rather than reflecting on their own contributions.

To date a number of factors have been consistently identified as influencing ratings of alliance; others have been investigated but as yet have shown variable results. These constitute variables that should be considered for inclusion in any study looking for factors influencing alliance. Research into these factors is briefly summarised in the sections below.

**Gender/ Gender Match:** A number of studies have included gender as a variable but have found no relationship with therapeutic alliance (Connolly Gibbons, Crits-Christoph et al. 2003, Coleman 2006). In contrast Wintersteen, Mensinger et al. (2005) studied gender match specifically and found that gender matched dyads rated alliance more highly.

**Ethnicity/Ethnicity match:** Evidence about ethnicity/racial match is conflicting. Whilst Farsimadan, Draghi-Lorenz et al. (2007) found better alliance in ethnically matched dyads, other studies have not found a significant relationship (Ricker, Nystul et al. 1999, Wintersteen, Mensinger et al. 2005). Further studies suggest that therapist ‘racial identity attitudes’ or multicultural awareness are more relevant to therapeutic alliance than ethnicity per se (Burkard 1997, Toops 1998).

**Client socio-economic status (SES):** SES has been little studied specifically as a variable, though as with gender, a number of studies have included it as a baseline variable and reported no effect (Connolly Gibbons, Crits-Christoph et al. 2003, Coleman 2006). However, the findings of a more recent qualitative study, based on phenomenological analysis of interview data, suggested that perceived differences in social class between therapist and client may influence the client’s perception of the therapeutic relationship, particularly in terms of the balance of power and how comfortable clients feel (Balmforth 2009).

**Client and therapist attachment status:** Both therapist and client attachment status have been specifically studied as factors in therapeutic alliance. Two reviews of the literature on client attachment (Diener, Hilsenroth et al. 2009, Smith, Msetfi et al. 2010) both concluded that client’s attachment security was positively correlated with high alliance, whilst client’s low attachment security related to low alliance. A recent meta-analysis of 24 studies on alliance and client attachment reported negative associations with alliance for attachment avoidance and for attachment anxiety (Bernecker, Levy et al. 2014). The evidence on the effect of therapist attachment is less conclusive. There is some evidence that therapist secure attachment is
associated with high alliance (Rozov 2002, Black, Hardy et al. 2005) though in contrast Dinger, Strack et al. (2009) found no such correlation. Therapist pre-occupied attachment has also been associated with low alliance (Rozov 2002, Dinger, Strack et al. 2009). Other studies have considered the interaction of client and therapist attachment status to be important, with dissimilar matching of attachment resulting in a higher alliance for patients with anxiety and insecure/pre-occupied attachment (Pretowski, Nowacki et al. 2011).

**Client and therapist personality/ interpersonal factors:** Client and therapist personality and interpersonal factors have also received research attention. For clients, characteristics of being friendly/submissive (Muran, Segal et al. 1994); agreeable (Coleman 2006); open and extravert (Mattox 2004, Coleman 2006) have been positively related to therapeutic alliance whilst being hostile/dominant (Muran, Segal et al. 1994, Connolly Gibbons, Crits-Christoph et al. 2003); cold/distant (Johansson and Eklund 2006); introverted and showing negative emotionality (Mattox 2004); have been reported to be negatively related to alliance. There is a small amount of evidence regarding therapist characteristics that might affect alliance; associations with the therapist being flexible, experienced, honest, respectful, trustworthy, confident, interested, alert, friendly, warm and open have been reported (Ackerman and Hilsenroth 2003). Although these studies potentially suffer from the reverse causation argument – is the therapist able to be warm and supportive because a good alliance exists for other reasons (Crits-Christoph, Gibbons et al. 2006) – they provide some indication of the potential factors contributed by the therapist to the formation of the alliance. Other studies suggest that it is the similarity of personality between the client and therapist that is important to alliance formation. A study by Taber, Leibert et al. (2011) found that clients rated the bond component of alliance more highly when there was congruence between the client’s and therapist’s personality; the task and goal components were not associated.

Several studies support the link between therapist interpersonal skills and behaviour and the therapeutic alliance; the suggestion is that attributes such as therapist experience and trustworthiness may contribute to a positive perception of therapist credibility which in turn convinces the client that this is a therapist worth forming a working alliance or relationship with (Karver, Handelsman et al. 2005).

**Client expectations/hope:** Client expectations of therapy, both of their role in it and of outcome, have also been investigated. Expectations for personal commitment have been positively related to alliance (Patterson, Uhlin et al. 2008) as have client’s expectations of
improvement (Connolly Gibbons, Crits-Christoph et al. 2003, Constantino, Arnow et al. 2005, Hersoug, Hoglend et al. 2010), expectations of facilitative conditions and expectations of therapist expertise (Patterson, Anderson et al. 2014). Pre-treatment expectations of good outcome were found to associate positively with alliance in treatment for major depressive disorder (Barber, Zilcha-Mano et al. 2014).

**Therapist experience/competence/adherence:** A number of studies have considered the effect of therapist experience, competence and/or adherence to the manual on ratings of therapeutic alliance. There is a general pattern of these variables not being related to patient’s ratings of therapeutic alliance (Svartberg and Stiles 1994, Dunkle 1996, Ogrodniczuk 1998, Hersoug, Hoglend et al. 2001, Barber, Gallop et al. 2006). Brauhardt, de Zwaan et al. (2014) did find a positive association between observer-rated alliance and therapist adherence. There is some evidence that therapist training and skill is positively related to therapist’s ratings of alliance (Hersoug, Hoglend et al. 2001).

**Therapist behaviours** Ackerman and Hilsenroth (2003) also discuss the factors in terms of therapist behaviours, finding associations between alliance and therapists who were active, supportive, understanding and affirming, who attended to the clients experience and facilitated expression of affect, who used exploration, reflection and accurate interpretation and who noted past therapy successes.

**Summary**

In summary there is support for the claim that both client and therapist characteristics are important to alliance formation and some evidence for the contribution of therapist interpersonal skills and activities. Alliance is a complex phenomenon, likely to be influenced by a range of pre-treatment characteristics and within session variables. It seems reasonable to suggest that, dependent on the client group and treatment in question, different variables may be more or less important to alliance formation. In recognition of the difficulties of assimilating and applying the evidence available Horvath (2006) suggests that a useful way forward might be for research to concentrate on identifying effective relationship processes and alliance associates within specific types of therapy.

In terms of this research the literature discussed above gives suggestions for variables that should be considered for inclusion in a model of associates of alliance.
1.4 Therapeutic alliance in parent-mediated interventions

1.4.1 Parent-therapist alliance and outcome

Although in mental health there is a vast literature on therapeutic alliance in adults, it has been somewhat neglected in child and adolescent treatments (Green 2006). What work has been done has tended to concentrate on investigating the association with outcome, and within that surprisingly few studies have looked at the parent-therapist alliance. Shirk and Karver (2003) argue that it is common in child treatments to include other members of the family, and that there will be separate alliances with the child and with the parent/other family members involved. They point out that in parent-mediated treatments or parent management training, where there is limited direct therapy with the child, it is the alliance with the parent that will be of primary interest. Despite this there have been few studies examining alliance in this context.

In their original review of 23 studies investigating alliance in child and adolescent treatments (Shirk and Karver 2003) only two (Kazdin and Wassell 1999, Nye, Zucker et al. 1999) were reported to have looked at alliance in cases where treatment involved parent training alone. A further two involved both parent training combined with individual treatment for the child (Green 1996, Adler 1998), three involved family training (Van Orman 1996, Johnson 1998, Johnson 2001) and one family training combined with individual child treatment (Green, Kroll et al. 2001). A modest association of alliance with outcome was found (r=0.24), and this was present across a wide range of treatment types and developmental levels of the child. Who was the subject of treatment did not moderate the relationship; though it appeared to be strongest with parent based treatments, compared with individual or family treatments, this was not significant.

There have been a few studies since the 2003 review which have looked more specifically at the parent-therapist alliance and have strengthened the evidence that alliance with the parent is an important factor in outcome. McLeod and Weisz (2005) found quality of parent-therapist alliance predicted a reduction of symptoms in an outpatient sample of children with depression and internalising anxiety receiving treatment as usual at an outpatient community health clinic. Kazdin, Marciano et al. (2005) assessed parent and child rated alliance in a sample of children receiving treatment for oppositional, aggressive and antisocial behaviour and reported associations between parent-rated alliance and both better end-of-treatment change and parent satisfaction. Kazdin, Whitley et al. (2006) investigated child-therapist and parent-therapist alliance in a combined treatment for oppositional-defiant disorder that included a parent training element. They found that both child-therapist and parent-therapist
alliance were related to child outcome, and that parent-therapist alliance was related to change in parenting practices. They also report that early drop out from treatment was related to the parent’s rating of alliance. Similarly Myers (2008) investigated alliance in parent-mediated Early Intensive Behavioural Intervention with young children with Autistic Spectrum Disorders and reported that both parent and consultant-rated alliances were associated with parent-rated child outcome and parental progress.

Some of these studies were included in the Shirk, Karver et al. (2011) updated meta-analysis of child and youth alliances discussed in Section 1.2.1. Only six of the studies that assessed parent-therapist alliance fulfilled the strict inclusion criteria for the meta-analysis (Adler 1998, Green, Kroll et al. 2001, Kazdin, Marciano et al. 2005, McLeod and Weisz 2005, Kazdin, Whitley et al. 2006, Kazdin and Whitley 2006). They calculated a weighted mean correlation for parent-therapist alliance separate from the other studies in the meta-analysis, reported to be $r = .21$ (95% confidence intervals quoted as +/- .08). Despite the similarity to the overall figure of $r = .22$ for all child/youth studies combined, this figure was not statistically significant, most likely due to the small sample size. Their review of the studies concludes nevertheless that parent-therapist alliance is predictive of outcomes and may also be an important factor in the continuation of therapy.

Thus the evidence to date suggests that in child treatments where the parent is involved, the strength of the parent-therapist alliance is likely to be a significant factor in final outcome.

### 1.4.2 Parent factors potentially influencing alliance

Having established the potential importance of alliance to outcome the next logical step is to consider the factors that might contribute to the establishment of strong alliances with parents. In the case of a parent-mediated intervention this has to involve acknowledging that parents, as the intermediaries for their children, represent a different kind of client to the direct adult or youth/child clients more commonly researched in the alliance literature. Some of the associating factors found with direct adult clients and discussed in Section 1.3 may also be relevant with parents (e.g. gender match, ethnic match, SES, attachment and personality, therapist fidelity and activities, client’s expectations and hope); however, these have not as yet been investigated specifically for parents as a client group. Additionally consideration needs to be given to factors that may influence the way in which parents uniquely approach the relationship with the therapist in intervention.
A few studies have specifically investigated baseline or process factors that may associate with alliance with parents, concentrating on parents’ pre-treatment social relations and support. In their study of an evidence based treatment for oppositional, aggressive and anti-social behaviour which included a parent training element, Kazdin and Whitley (2006) took two measures of parents social relations prior to treatment. Both the quality of interpersonal relationships in the family (r=.19 p<0.01) and the parent’s perceived sense of social support (r=.14, p<0.05) were found to correlate with parent rated alliance. In Green, Kroll et al. (2001), studying health gain in inpatient child and adolescent psychiatry units, parent-rated alliance was found to correlate with a measure of pre-treatment family functioning (r=.37 p<0.05).

Beyond the above there is little empirical evidence of factors that contribute to strong alliance with parents, but research with parents of children with autism does highlight some factors that might be considered.

**Parents’ Beliefs and Perspectives**

*Personal Beliefs and perspectives:* Reports in the literature suggest that what a parent brings to therapy, in terms of their beliefs, knowledge and perspectives, is important. Parents do not themselves have the presenting disorder of course; but they will have a unique and intimate knowledge of their child and have direct experience of the effects of the disorder on their child and family. Beliefs is used here to refer to more deeply held and permanent views about issues, whilst perspectives is used to refer to more transient ways of looking at or interpreting a particular situation. Perspectives may be influenced by beliefs. There is now a small but useful body of research about factors that influence the way parents approach intervention, including for example the parent’s beliefs and understanding about their child’s disorder, their ideas about what might be effective and their sense of self-efficacy in managing their child’s difficulties. Parents have often been considered to be a homogenous group in clinical practice (Hanna and Rodger 2002), however there is increasing recognition of the need to consider their individual perspectives and to understand their beliefs and accounts in order to intervene effectively (Hanna and Rodger 2002, Glogowska and Campbell 2004).

Studies that have been done in this area have indicated that parents of children with a disability enter the relationship offered by intervention with their own unique set of beliefs, knowledge and perceptions, not only about their child's condition but also about how children develop and learn. For example, parents of children referred for speech and language therapy
hold differing views on a range of issues from the importance of play and the effect of watching TV to the influence of gender on language learning, the role of the parent in intervention and the extent to which they feel their own behaviour may be a possible cause of language delay (Marshall, Goldbart et al. 2007).

In the more specific case of parents of children with autism, many hold strong and wide ranging beliefs about the cause of autism (Dale, Jahoda et al. 2006, Harrington, Patrick et al. 2006). Dale, Jahoda et al. (2006) argue that beliefs about cause and prognosis are likely to influence the type of intervention that parents think will be effective, whilst Ravindran and Myers (2012) suggest that causal beliefs influence parent’s expectations from treatment which in turn may effect alliance. In corroboration with this view Hayhow (2009), interviewing parents of children taking part in the Lidcombe Program for stuttering, found that a parent’s positive or negative experiences of the programme were influenced by the extent to which they were able to make sense of the principles and procedures of the programme within their own set of beliefs about stuttering and parenting.

In the context of a training intervention for parents of children with autism it is plausible that therapeutic alliance, in particular the task alliance, might therefore be influenced by the parent’s beliefs about the causes of autism in their child. A number of studies have investigated causal beliefs both in terms of aetiology of belief i.e. genetic, biomedical etc. (Harrington, Patrick et al. 2006, Al Anbar, Dardennes et al. 2010) and locus of cause e.g. internal or external (Dale, Jahoda et al. 2006). Al Anbar, Dardennes et al. (2010) and Cho (2009) both found that the choices parents made about treatments for their child with autism were influenced by their causal beliefs. For example, beliefs about environmental causes were associated with increased use of dietary and detoxification interventions, while hereditary beliefs were clearly associated with the use of metabolic treatments and vitamin supplements. In a parallel strand of evidence from the mental health literature, Iacoviello, McCarthy et al. (2007) found that treatment preferences influenced the development of therapeutic alliance in a randomised control trial of interventions for depression. The PACT intervention is a psychosocial communication based intervention; it may well be that parents who for example believe in dietary/ gut related causes will only feel strong task alliance to a dietary intervention. Initial causal beliefs may therefore be an important baseline variable to investigate and include in this research.
Cultural context: Parental beliefs and perceptions extend beyond causes of the disorder to interpretations of symptoms and priorities for intervention. Reviewing literature on the cultural context of autism Mandell and Novak (2005) found evidence of different cultures attributing symptoms differently and placing different emphases on developmental skills such as language learning and conformance to the social norm (Daley and Sigman 2002, Coonrad 2004). Such emphases will potentially affect priorities for intervention and parental ideas on the acceptability of the intervention on offer. Similarly many parents consider wider issues, such as child self-esteem and well-being as being of equal importance as the communication/social impairment for which intervention is nominally sought (Markham and Dean 2006).

Parents’ ideas: Parents also have their own ideas about what might or might not be effective with their child and will often have already tried strategies before coming to intervention (Briggs 1998, Marshall, Goldbart et al. 2007, Hayhow 2009). Failure to discuss these ideas with parents can leave them with a perception that therapy is not helpful to them (Glogowska and Campbell 2000). In a similar vein Brady, Peters et al. (2003)’s empirical study of interaction in home visits found that the more the therapist accepted and praised parents’ own ideas the more the parent initiated in discussions, suggesting that discussion and acceptance of their own ideas encourages parents to engage in a more pro-active way with the therapist. This increased participation would likely be reflected in a stronger alliance.

Alignment of beliefs: Equally importantly in terms of alliance formation though is the parallel evidence that parents and therapists’ beliefs are often not aligned. Stone and Rosenbaum (1988) found that parents’ views and autism specialists’ views differed on a number of key points relevant to intervention. Although their study is over 25 years old, the more recent study by Dale, Jahoda et al. (2006) cited above suggests that disparity likely still exists, not least because the amount of information available for parents of children with autism nowadays is overwhelming. The quality of information available on the internet varies widely, especially on user run sites, and there is a suggestion that many people turn to these for information as alternatives to mainstream guidance (Theodosiou and Green 2003). In terms of language learning Marshall, Goldbart et al. (2007) found important discrepancies between parents’ views and therapists’ views around the roles of play, imitation and direct teaching in therapy, all of which are areas relevant for a communication focused autism intervention.
These potentially differing beliefs and views between individual parents, and between therapists and parents, become particularly relevant when taken alongside evidence that early intervention therapists do not always feel confident or competent to collaborate at a level that involves investigating and taking into account client’s feelings and beliefs but are more comfortable focusing on objective matters such as therapy goals and techniques (Hanna and Rodger 2002, Brady, Peters et al. 2003). Any reticence on the part of the therapist to explore the parent’s relevant feelings and beliefs is likely to impact on their ability to work collaboratively and form a strong alliance.

**Summary:** Given this evidence it seems plausible to suggest that the extent to which a therapist and parent are able to openly discuss their respective beliefs and perspectives early on in the therapy, and address any differences between them in relation to the intervention being offered, will affect their ability to form a strong alliance. Hayhow (2009) reported that parents who were sceptical of the Lidcombe programme at first had a better experience if they were able to resolve problems in collaboration with their therapist. This suggests that, where an intervention does not initially match a parent’s belief sets, an open discussion of this early in treatment can help. Hatcher and Barends (2006) suggest that ‘open and effective encounter with the client’s disagreement or doubt about the treatment deserves greater emphasis. Handled well this disagreement can lead to a stronger alliance.’ Briggs (1998) argues the necessity to establish shared meaning early on between the therapist and parent and suggests it is the role of the family to give their perspective on the problem in as much detail as possible and of the clinician to listen and facilitate the parent in doing this. She considers this phase critical to the establishment of a working relationship, or alliance. In a similar vein Marshall, Goldbart et al. (2007) suggest that a clearer understanding of parents’ views may lead to more effective interventions through ‘better engagement’ and recommend that therapists use specific techniques such as ethnographic interviewing to explicitly uncover such beliefs. Głogowska and Campbell (2000) suggest that a lack of attention to parents’ perspectives can lead to the parents’ ‘enthusiasm dwindling’ and suggest that ‘parents’ attitudes to therapy may underlie their co-operation with therapy.’ Taken together, all these studies highlight the potential importance of eliciting and discussing a wide range of parental perspectives and beliefs in the establishment of a strong alliance and suggest the extent to which this is achieved may be a factor worth investigating.
**Parents’ health and wellbeing**

Another potential area that may have a bearing on the establishment of alliance with a parent is the parent’s health, mental health and well-being. Parents of young children receiving intervention will be at different stages in terms of their acceptance of the diagnosis and their resolution with it. In a qualitative analysis of 52 accounts of experiences of parenting a child with autism, Altiere and von Kluge (2009) reported that all parents interviewed used extreme emotion words, such as distraught, despair, devastation, to describe their initial feelings on diagnosis. As part of a wider study, Wachtel and Carter (2008) conducted the Reaction to Diagnosis interview (RDI) with 63 mothers of young children with autism and found that parents varied in the extent of their emotional and acceptance resolution. Interviews were conducted at a mean length of time of 9.9 months after diagnosis; the implication of this is that parents receiving early intervention may not yet be fully resolved to their child’s diagnosis.

Research conducted into the experience of parenting a child with autism report a range of observed negative effects on parental health, mental health and wellbeing. Although not all parents will experience these, and many also report positive effects such as increased patience and tolerance (Altiere and von Kluge 2009), there is good evidence that the majority of parents are dealing with a range of stresses over and above those found for the parents of typically developing children or children with other disabilities. Using quantitative measures Quintero and McIntyre (2010) found levels of daily parenting hassles, life stress and depression to be higher in parents of pre-school children with autism than parents of typically developing pre-school children; Bromley, Hare et al. (2004) similarly reports high levels of psychological distress. Using data from qualitative interviews of 20 parents, Ludlow, Skelly et al. (2012) found that parents describe this stress as on-going and never-ending. Extreme fatigue has also been reported (Mackintosh, Goin-Kochel et al. 2012, Giallo, Wood et al. 2013) along with reduced or altered networks of social support and feelings of isolation (Altiere and von Kluge 2009). Some parents describe loss of self-esteem and confidence in parenting abilities (Brewer-Johnson 2005, Ludlow, Skelly et al. 2012), embarrassment at dealing with other people’s judgements, lowered self-efficacy (Hastings, Kovshoff et al. 2005) and feelings of guilt and concern about effects on siblings (Quintero and McIntyre 2010, Ludlow, Skelly et al. 2012).

The extent to which parents are dealing with these underlying problems of health and wellbeing seem likely to impact on their relationship with the therapist in parent-mediated
interventions such as PACT. In terms of goal and task alliance, one study found parent-child interaction styles to be related to the extent to which parents had emotional resolution with their child's autism diagnosis (Wachtel and Carter 2008). Some of the difficulties described above, such as exhaustion and depression, may impact on the extent to which a parent agrees with, and is able to co-operate with, the demands of parent-mediated intervention. In terms of the bond element of the alliance it would be reasonable to project that parents who are enabled to discuss some of these underlying emotions with an empathic therapist will develop a closer and more trusting relationship.

1.5 Summary and research questions

1.5.1 Summary

The concept of therapeutic alliance is well established and the positive association between high alliance and outcome well documented in adult and child mental health literature; although there has only been limited research into the parent alliance-outcome relationship in parent training interventions, those studies that have been done suggest that it is similarly a consistently positive factor in outcome. Research into factors contributing to alliance formation with parents is extremely limited. Although, as adults, some of the factors found important in the direct adult client literature may be relevant to alliance with parents, the status of the parent as an intermediate client for their child means that other factors may also influence the formation of alliance. Qualitative research into parents’ perspectives suggests that parents of children with autism hold beliefs about a range of issues relevant to intervention that may or may not coincide with those of the professionals working with them and the treatment in use. Many are also dealing with a range of stresses and emotions related to being a parent of a child with autism, which may affect their willingness and ability to engage with a parent-mediated intervention. The overarching aim of this thesis is to investigate factors potentially related to alliance with parents, and in particular whether therapist elicitation, exploration and integration of parental beliefs, perspectives and feelings within initial intervention sessions lead to a stronger alliance. By definition alliance is a measure of the extent to which the relationship established between the therapist and the client allows them effectively to carry out the purposeful work of therapy. It is plausible to suggest that unless parental beliefs and perspectives are elicited and taken into account early in therapy then the collaboration on goals and tasks of therapy that characterises a strong alliance cannot be effectively accomplished, nor can an effective bond be developed. Open discussion
of parental perspectives could be considered to reflect therapist characteristics of being interested, respectful, confident and open, all of which, as discussed in Section 1.3, have previously been proposed as potential determinants of alliance.

1.5.2 Research Questions

Preliminary research questions, investigated in preparation for the main study, were:

1) Are there underlying components to parent-therapist alliance in the PACT intervention and do these components relate to Bordin (1979)’s traditional conceptualisation of the goal, task and bond domains?

2) Can a reliable coding scheme be developed to quantify the expression of parental perspectives and therapists responses to them as variables for empirical analysis?

The primary research questions for the study were then:

1) Are parent prior causal beliefs and other baseline variables associated with quality of parent-therapist therapeutic alliance?

2) Is the quality of belief and perspective-sharing with the therapist in the early sessions of therapy associated with quality of parent-therapist therapeutic alliance?

The following predictions were made:

Prediction one: Parent-therapist dialogue that contains greater parental expression of underlying perspectives will be associated with higher therapeutic alliance as rated by a) parents and b) therapists.

Prediction two: Parent-therapist dialogue that contains greater therapist integration of expressed parental perspectives will be associated with higher therapeutic alliance, as rated by a) parents and b) therapists.

1.5.3 Research Output

The output of the study is evidence on the antecedents of positive treatment alliance, both in terms of baseline variables and process variables obtained from analysis of parent-therapist dialogue early in treatment. The results of the study contribute in an innovative way to the literature on determinants of alliance and provide preliminary evidence to help therapists build stronger alliances and collaborate more effectively with the parents with whom they work.
CHAPTER 2
RESEARCH DESIGN AND METHODOLOGY
2.1 Introduction

The research in this thesis drew upon primary data collected within the Pre-school Autism Communication Trial (PACT). The PACT dataset, which includes measures of therapeutic alliance, parent demographic data, therapist fidelity scores, parent interviews and video-recordings of intervention sessions, afforded a rare opportunity to investigate baseline and process factors associating with the quality of alliance in a large and demographically varied sample. Although the raw data collection was conducted as an integral part of the PACT trial all the research presented in this thesis has been independently conducted.

In Section 2.2 the PACT trial and intervention will be briefly described, in order to provide the reader with an understanding of the setting for the research. The measures and procedures employed to collect the PACT data subsequently used in this research will be set out in Section 2.3. The format and extent of data available from the PACT trial influenced aspects of the design of this research, including the choice of methodology and research methods.

In Section 2.4 preliminary design considerations will be discussed, including the research paradigm within which the research was conducted, the factors that led to the choice of methodological approach and issues of researcher reflexivity.

Section 2.5 outlines the overall design of the research. A detailed diagram of the research process has been included to assist in giving an overview of the whole process. Sections 2.6, 2.7 and 2.8 will respectively cover the qualitative, instrument development and quantitative phases of the research. The aim of each section is to explain the rationale behind the choice of methods, measures and analyses in each phase. Since the thesis is written in the alternative format, with the Results Chapter incorporating papers in a format suitable for publication, where appropriate the procedural detail will be covered in the relevant papers to minimise duplication in the thesis.
2.2 Research setting: The PACT trial

2.2.1 The PACT Trial and Intervention

This research uses data collected by the PACT consortium during the Pre-School Autism Communication Trial. PACT was a multi-site randomised control trial (RCT) of the efficacy of a parent-mediated intervention for young children with autism, conducted between 2006 and 2009 (Green, Charman et al. 2010). The PACT study was approved by the Central Manchester Multi-Centre Research Ethics Committee. All participants gave written informed consent to take part in the trial, including for the use and analysis of video recordings in the research. A second level of consent was given to cover public viewing of videos; correspondence with the committee confirmed that this implied consent for use of anonymous quotations in this research.

The PACT intervention is a parent-mediated psychosocial communication intervention for children with autism. The therapist works with the parent only and no direct therapy with the child is undertaken. Parents attend 18 clinic based sessions over a period of 12 months; sessions are fortnightly for the first six months then monthly. The intervention targets parental behaviours that theoretically enhance communication and interaction in the child; the focus is on increasing parental sensitivity and responsiveness to the child’s communication signals, and on promoting increased communication in the child through the parent’s use of developmentally staged strategies. Further details of the intervention can be found in the supplement to Green, Charman et al. (2010). Within each intervention session the therapist records parent-child interaction in naturalistic play and the video is then used as the basis of discussion between the therapist and parent, leading to the negotiation of parent and child goals. Therapists are trained to encourage parental observations and value parental contributions to the discussion. Throughout the trial all feedback discussions between the parent and therapist were digitally recorded in full to assess therapist fidelity to the intervention model. Compared to families receiving treatment as usual in the control arm of the trial, parents in the intervention arm showed higher levels of synchrony in their interactions with their child at endpoint, i.e. the intervention was effective in encouraging specific parental behaviours. A positive effect in favour of the intervention was also found for child initiations.
Whether there is an association between therapeutic alliance and outcomes in the PACT trial is being investigated by the PACT consortium separately from this thesis. This study focuses on research questions relating to baseline and process associates of alliance in a parent-mediated intervention.

2.2.2 Participants in the PACT trial

Recruitment was to one of three intervention sites, London, Manchester and Newcastle upon Tyne. To be eligible families had to have a child with a confirmed diagnosis of core autism aged between 2;0 and 4;11 at baseline; children who had a twin also with autism were excluded as were children with a nonverbal age equivalent of 12 months or younger, epilepsy requiring medication or a severe hearing or visual impairment. Of relevance to this research, exclusion criteria for parents were severe hearing or visual impairment; severe psychiatric disorder requiring treatment. In addition the parent had to have sufficient English to participate in a parent-mediated intervention.

152 families took part in the PACT trial; 77 of these were allocated to the intervention arm. This research uses data only from those families in the intervention arm of the trial. One parent from each family was the focus of the intervention, 75 were mothers and 2 fathers. Other parents or family members had the opportunity to be present during the session if they wished. Therapists in the PACT trial were all qualified and registered speech and language therapists experienced in working with children with autism and their families; all were female. Six therapists delivered the intervention across the three sites; therapists were specifically trained to deliver the manualised PACT intervention and their fidelity to the intervention was monitored throughout the trial.
2.3 The PACT Data

2.3.1 Demographic data

Demographic data for parents were collected as an integral part of recruitment to the PACT trial. Research assistants interviewed parents as part of the baseline assessment protocol and recorded data on a standardised pro-forma. Data were collected on parent ethnicity, age, marital status, household composition, educational and work history and family income.

2.3.2 Alliance data

Alliance data were collected systematically throughout the PACT trial via parent and therapist versions of a PACT Alliance Questionnaire, constructed specifically for the trial by the PACT team. Items were agreed by expert consensus within the team, and were taken from the Working Alliance Inventory (WAI; Horvath and Greenberg 1989), which is derived from Bordin (1979)’s conceptualisation of alliance, and the Family Engagement Questionnaire (FEQ; Green, Kroll et al. 2001), which was developed for use with families in child psychiatric outpatient/inpatient settings. Minor changes were made to the wording of items originally designed for direct clients to adapt them for parents, who were the population of the study. Separate questionnaires were developed for therapists and for parents; the final questionnaires consisted of 22 items for therapists and 26 items for parents, scored on a 4 point (strongly agree/agree/disagree/strongly disagree) rating scale (Appendix A).

Questionnaires were sent directly to parents and therapists for all 77 intervention cases and were completed by them independently at three time points, 3, 6 and 9 months into the 12 month intervention (T1, T2 and T3 respectively). To maintain confidentiality questionnaires were sent from and returned to the research offices, located in separate buildings from the intervention teams and staffed by different personnel. Collection of alliance data only began 6 months into the 3 year trial such that 15 cases had already passed the three month time point – for these cases alliance data were collected at 6 and 9 months only.

2.3.3 Parents’ causal beliefs data

Information about parents’ causal beliefs was collected as part of a wider semi-structured interview with the parents prior to commencement of intervention. The interview was conducted at home by the PACT research speech and language therapist allocated to the
family. The main purpose of this visit was to inform parents about the intervention and to gather information about the parent’s beliefs, priorities and preferred learning style that might influence the delivery and/or effectiveness of intervention. The eliciting question for the causal beliefs data was open-ended, ‘What do you feel was the cause of autism in your child?’, thus allowing parents the opportunity to freely express their beliefs. Therapists recorded a summary of the parent’s response on the interview form. Some of these summaries included verbatim quotations. Causal belief data were collected between September 2006 at the start of the trial and March 2008, when the final participants began intervention.

2.3.4 Intervention session video data

PACT protocol was for all intervention sessions to be digitally video recorded in full throughout the trial, for the purpose of ensuring therapists maintained fidelity to the intervention. The participants quickly became used to being recorded as the PACT intervention itself was video aided. At the start of the session the therapist videoed the parent and child in naturalistic play. The therapist and parent then reviewed and discussed the play video together at length, with the aim of optimising parent interaction with the child, and subsequent child communication. Throughout the sessions therapists encouraged parents to make their own observations and share their perspectives on their child’s communication and the interaction between themselves and the child. Parents were guided by therapists towards the use of specific PACT strategies in their interaction. These discussions between the therapist and the parent comprised the core part of the intervention session and were themselves videoed (for the purpose of auditing fidelity), forming a pool of parent-therapist interaction data. The parent-therapist feedback part of the sessions across the trial varied in length between 35 and 120 minutes. 1087 PACT sessions were completed over the course of the trial; session videos were available for the majority of these, though technical problems with equipment meant that some videos were missing or incomplete.

2.3.5 Therapist fidelity data

Individual therapist fidelity to the intervention manual was assessed by independent members of the PACT research team using the PACT Fidelity Rating Scale. The scale assessed fidelity to the intervention protocol in terms of the content of the intervention, the use of specific delivery techniques, the structuring of the session and the environment in which the session took place. 44 sessions were randomly chosen across the trial, representing 7 to 8 sessions per therapist, allowing an average fidelity score per therapist to be calculated.
2.4 Preliminary design considerations

2.4.1 Research paradigm

The vast majority of published alliance research is based on an essentially positivist or post-positivist paradigm, employing quantitative methodologies to search for relationships between measured variables of interest. Within the post-positivist approach the belief is that knowledge is gained through objective observation and measurement of a reality that is assumed to exist; but it is acknowledged that such knowledge cannot be perfect especially where humans and human behaviour are being studied (Creswell 2013). Complex behaviours are generally reduced to a set of variables that can be measured and subjected to hypothesis-driven or exploratory testing. Alliance itself is an empirical concept, an attempt to reduce the complex nature of the collaborative working relationship in therapy to a set of measurable constructs. It is traditionally within this paradigm then that the relationship between alliance and outcome has been investigated and that factors that may be influential in the quality of alliance have been explored.

In the wider context of the therapeutic relationship there have been some exceptions to the post-positivist approach e.g. Balmforth (2009) used qualitative methodology within a phenomenological approach to find that for some clients the perceived effects of socio-economic disparities influenced the client’s experience of the therapeutic relationship in counselling. This type of approach is concerned with understanding an individual’s experience of an issue, recognising that individuals’ different experiences of the same event are equally valid and represent different realities. However, as discussed in the introduction, therapeutic alliance is not the same as the therapeutic relationship. Alliance is concerned only with those aspects of the relationship that contribute to the ability of the therapist and client to work collaboratively towards mutual goals, and is defined specifically as a measurable construct. In the post-positivist tradition of alliance research the findings of Balmforth’s study would likely be interpreted as initial evidence that socio-economic status might be a factor to measure and include as a variable in a quantitative analysis.

The overarching aim of this research (i.e. to investigate associations between the empirical construct of therapeutic alliance and other measured variables) sits within a post-positivist worldview. As with the vast majority of alliance research, this is therefore the paradigm within which this research as a whole is situated.
2.4.2 Research methodology

A post-positivist paradigm generally points to the use of quantitative methodology and the original intention was to conduct this research using wholly quantitative methods. Much of the PACT data was already available in quantitative form i.e. the alliance data, the demographic data and the therapist fidelity data. Other data however was qualitative in nature i.e. uncoded. Specifically the parents’ causal belief data were in the form of therapist written records of parent responses to an open ended interview question, and the session data comprised video recordings of original dialogue between the therapist and the parent. This data needed coding before it could be used in quantitative analyses.

During the research design phase a search of the literature for health provider-client interaction coding schemes was conducted, in an attempt to identify a suitable measure. There are many good reasons for choosing established measures in research. Karver, Handelsman et al. (2006) report that a plethora of different instruments have been used in alliance research to measure similar variables and that such a course of action effectively limits the conclusions that can be drawn across studies. However, having reviewed the video coding schemes that were available it was concluded that there were none that focussed sufficiently on the exact aspects of interaction the research questions required. Frankel (2001), discussing the use of coding schemes in health provider-client interaction research, stresses the importance of ensuring the research question determines the method, and the coding scheme, used to study it and not the other way round. Given the novel nature of the research questions and the absence of any favoured alternative measure for parent perspectives in the literature, the decision was taken to develop a new scheme specific to the purpose of the study.

Various methods have been employed to devise interaction coding schemes. Some are theoretically driven e.g. Ribeiro, Ribeiro et al. (2013), others by expert consensus e.g. Barnett, Niec et al. (2014) and Zhou, Cameron et al. (2012). However, as there was little written in the literature about how and on what topics parents express their perspectives in sessions, and how therapists respond to parent’s expressed perspectives, more information was required before a coding scheme could be reliably developed using these deductive methods. What was really needed was a qualitative analysis of parent-therapist dialogue to provide more specific information on which a coding scheme could be based. Employing a qualitative approach to exploring the session data would allow parental perspectives and therapists’ responses to them to be more fully described than in the current literature. Categories created in the qualitative
analysis could form the basis of a new coding scheme to create the variables required for the subsequent quantitative analyses. A number of advantages were expected from this approach:

1) Categories derived during the qualitative analysis could be used directly as items in the developed scheme
2) Provided the qualitative analysis was conducted with suitable rigour then the inductive approach would provide ecological validity for the items in the scheme.
3) Quotations extracted from the qualitative analysis could form the basis of illustrative coding examples in a manual, thus situating the scheme in the context of real data.
4) Descriptive statistics from that qualitative analysis could give preliminary information on the extent to which presence of codes and categories varied between sessions, and therefore their utility in differentiating sessions.

Qualitative and quantitative methodologies can be formally combined by employing a mixed methods approach. According to Creswell (2013) mixed methods is relatively new as a distinct approach to research, dating from the late 1980s and early 1990s. It aims to integrate both quantitative and qualitative methodologies in a manner that best allows the research questions to be answered. The essential features of a mixed methods approach as described by Creswell can be summarised as follows: a) it involves the collection and analysis of both qualitative (open-ended) and quantitative (closed) data, b) procedures for each element are rigorously conducted in a similar manner as would be expected in a single design, c) the two types of data are integrated within a distinct and defined mixed methods design. Creswell notes that it is also possible to merge differing paradigms within a mixed methods design. Mixed methods researchers often take a pragmatic stance to their work; the pragmatic worldview does not commit to a single philosophy or reality, the focus is on the research problem and the use of all available approaches to best investigate it.

Given the existence of both qualitative and quantitative data in the PACT database, and the lack of a suitable published quantitative coding scheme, a mixed methods approach was selected for this research.

2.4.3 Researcher bias / reflexivity

At an early stage in the design it was necessary for me to reflect on how my experiences as a part-time therapist on the PACT trial may lead to researcher bias and take steps to
acknowledge and minimise any possible effects. I was the therapist for 8 of the 77 families in the intervention arm of the trial, which had implications for both sample selection and coding.

The first consideration was whether data from these 8 families could be included in the study analyses. It was recognised that doing so would certainly be an issue for any phases of the research that involved qualitative analysis or coding of the interaction between therapist and parent. As the main coder I could not be certain that I would be able to approach my own videos in the same way as the other videos i.e. observing and coding only what was in the video in front of me, without allowing the detailed knowledge of the parent gained from having worked with her over the whole intervention to influence my interpretation of what I was observing. There was clearly no way of blinding the videos so the decision was made to exclude cases for which I was the therapist from:

1) The sample used for the qualitative analysis from which the coding scheme was developed
2) The sample coded for expression and integration of parental perspectives using the scheme.

However it was deemed acceptable to include my cases in all other analyses using primary PACT data since; a) the data had already been collected and therefore there was no potential to introduce bias, and b) their inclusion increased the sample size thereby improving the power of these analyses.

A second consideration was whether my knowledge of the other therapists in the trial would influence how I coded the videos. Other than having someone else code all the videos, which was not possible, there was no way round this; I therefore had to bear this possibility in mind when coding and attempt to minimise any effects. Having a percentage of the sample double-coded by a second coder for reliability purposes helped ensure no bias was introduced in this way.
2.5 Research design

2.5.1 Research aims

The overarching aim of the thesis was to investigate factors associating with parent-rated and with therapist-rated alliance, with specific attention to variables related to parents’ perspectives and beliefs. The research questions required the examination and incorporation into the analyses of the following factors:

1) Client, therapist and process factors previously investigated in the literature as potential associates with alliance in adults, for which data were available in the PACT trial.
2) Newly proposed factors being investigated as part of this study
   i) parental causal beliefs
   ii) expression of parental perspectives
   iii) therapist responses to expressions of parental perspectives.

2.5.2 Overview of the design

A sequential exploratory mixed methods design was chosen for the research, including an intermediary instrument development phase. In mixed methods notation this was a [qual → QUAN] design, with an initial exploratory qualitative phase preceding the primary quantitative phase. Creswell (2013) describes the intent of this mixed methods strategy as being to develop better measures for specific concepts of interest to the investigator, when no adequate instrument exists. The diagram in figure 1 illustrates the research design and shows how the different phases of the work inter-relate in preparing the PACT data for the final quantitative analyses.
Figure 1  Overview of the research design

- **PACT DATA**
  - Parent Interview
  - Demographic Data
  - Ave. Therapist Fidelity Ratings

- **PROCESS**
  - PACT Session Videos
  - Parent Rated Alliance Questionnaire
  - Therapist rated Alliance Questionnaire

- **QUALITATIVE PHASE**
  - Thematic Analysis
  - Development of PPCS
  - Video Coding using PPCS

- **INSTRUMENT DEVELOPMENT**
  - Descriptive and Factor Analyses of Alliance Questionnaires

- **QUANTITATIVE PHASE**
  - Causal Belief Variables
  - Demographic Variables
  - Therapist Fidelity Variable
  - PPCS Variables
    - Expression (IOC; PAS; PSD)
    - Integration (IOC; PAS; PSD)
  - Parent Alliance
    - Total Alliance
    - *Belief in therapist
    - *Belief in Treatment
  - Therapist Alliance
    - Total Alliance
    - *Bond
    - *Right Treatment
    - *Parent Engagement

- Investigation of baseline and process factors associated with alliance
  - Univariate Correlations
  - Multivariate Models
    - *Parent Alliance
    - *Therapist Alliance

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2.6 Qualitative Phase

2.6.1 Overview

The qualitative phase consisted of two concurrent steps:

1. **Analysis of PACT session videos:** Parent-therapist dialogue in a sample of PACT session videos was qualitatively analysed to firstly describe, and then categorise, parents’ expressed perspectives and therapists’ responses to them. In the hierarchy of qualitative studies suggested by Daly, Willis et al. (2007) the analysis was intentionally planned to be a level 3 descriptive qualitative study; i.e. qualitative methodology would be used primarily as a tool for describing categories, from which a quantitative coding scheme that is grounded in the data could be developed. A pragmatic stance to the qualitative analysis was taken. Morgan (2007) summarises the pragmatic approach as follows; ‘it is not the abstract pursuit of knowledge through “inquiry” that is central to a pragmatic approach, but rather the attempt to gain knowledge in the pursuit of desired ends.’ In this case the knowledge is required for the purpose of instrument development (Bryman, Becker et al. 2008), and the stance is in keeping with the purpose for which the analysis is being undertaken.

2. **Analysis of parent interviews:** Qualitative methods were used to describe parents’ beliefs about the causes of autism as reported in the interview data, then to categorise them directly into variables appropriate for subsequent quantitative analysis. Again the analysis was descriptive with a pragmatic stance; the aim was to create categories of belief to be used as variables in subsequent quantitative analysis.

2.6.2. Analysis of PACT session videos

**Background:** The aim of the qualitative analysis of parent-therapist dialogue was to gain a better understanding of the issues and topics on which parents expressed their perspectives in intervention sessions and of how therapists responded to these expressions, then to create categories from the data which could be used to inform items in a quantitative coding scheme.

The intervention session videos provided a naturalistic way of investigating this through qualitative analysis. In comparison to an interview format where the interviewer may ask the parent to reflect on what is important to them e.g. as used in Glogowska and Campbell (2000) and Marshall, Goldbart et al. (2007), the session data is more observational in nature. Parents
in the intervention quickly became habituated to the presence of the camera as all sessions were recorded for fidelity purposes. The videos record the actual dialogue and the perspectives that parents express in the intervention sessions; the purpose of the dialogue is not to answer interview questions related to the research questions, but is part of the ongoing intervention. The naturalistic nature of the dialogue is a strength of the data.

**Research questions**

1) On what themes do parents express their perspective in sessions?
2) How do therapists respond to and use parent’s expressed perspectives in sessions?

**PACT data available (see Section 2.1):** Intervention session digitally recorded videos.

**Choice of sample:** Sessions for the qualitative analysis were taken from the pool of videoed PACT sessions, excluding those that had already been selected to form the sample in the quantitative phase. Since the ultimate aim of the qualitative analysis was to inform the development of a quantitative coding scheme, it was important that the sample for the qualitative analysis should be representative of the sample on which the coding scheme would subsequently be applied. A purposive maximum variation sample was therefore selected; the aim was to include sessions that reflected the range of therapists, parents and children in the PACT trial. Once suitable cases had been identified to achieve this, early sessions from cases were randomly chosen for analysis.

**Methods employed and rationale:** Thematic Analysis was chosen as an appropriate qualitative method for this phase of the research. Willig (2013) reports that it is only recently that thematic analysis has been advanced and recognised as a qualitative method in its own right, rather than simply a tool or skill underpinning other, more sophisticated, qualitative methods such as Interpretative Phenomenological Analysis (IPA) or Grounded Theory. It has been described as ‘a search for themes that emerge as being important to the description of the phenomenon [under investigation]’ (Fereday and Muir-Cochrane 2006). Thematic Analysis therefore meets the descriptive aims of the qualitative analysis in this case. Thematic analysis can be inductive, whereby themes are generated directly from the data and not influenced by existing theory, or it can be theoretical, whereby existing theory and theoretical concepts guide the analysis (Braun and Clarke 2013). Both can also be combined in a single analysis.

The procedure for conducting Thematic Analysis (TA) set out in Braun and Clarke (2006) was followed in this research. The purpose of each of the steps of analysis is described below.
along with a description of how these steps were accomplished in the analysis and any additional procedures followed to ensure quality and rigour in the analysis.

1. **Transcription:** Thematic analysis first requires preparation of a thorough, high quality transcript from the collected audio or audio-visual data to be used in the analysis. The sample intervention videos were transcribed verbatim. Since non-verbal communication was considered to be important to this analysis the transcriptions were then synchronised with their videos in the software package Atlas.ti v6 (2011). In this way the transcriptions were thoroughly checked, since the process involves playing the video back against the transcript and marking synchronisation points on the transcript approximately every minute. Once the video and transcript were synchronised any section of text could be highlighted and instantly played on the video, allowing non-verbal communication to be considered alongside the text when coding.

2. **Reading/familiarisation; taking note of items of potential interest:** This step allows the analyst to become familiar with the data and to begin to form some ideas about features of the data of interest.

3. **Coding – complete across the entire dataset:** The aim in complete coding is to identify anything and everything that may be relevant to the research question. Codes should capture the particular features of the excerpt of data that are of interest to the research question; labels are given that describe the feature succinctly. Excerpts of data can be given more than one code. Six transcripts were included in the initial complete coding phase of the analysis. An inductive approach to coding was taken. All sections of dialogue related to the expression of parental perspective were given a descriptive code; coding was kept broad to include as much detail as possible i.e. what their perspective related to, what their perspective was, how the therapist responded to the expressed perspective. Codes were discussed with supervisors during the process to ensure plausibility and revised and refined in an iterative process.

4. **Searching for candidate themes:** Themes represent patterns in the data, clusters of codes that can be combined around a central organising concept. Themes in TA can be related to each other hierarchically or linearly. Braun and Clarke describe three main layers of themes; overarching themes, themes and sub-themes. Overarching themes capture the overall sense of a number of related themes; they tend not to have any individual codes or data extracts tied directly to them. Sub-themes characterise specific aspects of a theme. Individual codes may be promoted to the status of a theme, but most themes and subthemes are made up of a combination of related codes.
combining the inductively derived codes to form themes a more theoretical approach was taken, in keeping with the aim of the analysis to produce themes/categories that could be translated into variables potentially related to the quality of alliance formation. The themes and overarching themes were created from the codes with a focus on describing and classifying the range of topics on which parents and therapists expressed their perspectives (e.g. the child’s motivation, the parent’s own feelings), since theoretically these may relate to different components of the alliance. Individual codes describing how parents and therapists responded to each other’s perspectives were retained. Two further transcripts were coded to ensure saturation at the level of themes and overarching themes had occurred i.e. that the patient-therapist dialogue could be adequately described within the themes generated.

5. Reviewing themes/Producing the thematic map. In this step the candidate themes are reviewed and revised as necessary and the thematic network, visually illustrating the relationships between layers of themes drawn up. Candidate themes were discussed with supervisors as part of the ongoing process. The description of themes and production of the thematic network were an important part of the analysis, since the hierarchical structure would be used to help define under which themes excerpts of data would be coded in the quantitative scheme to be produced on the basis of the analysis. Once the thematic network had been completed it was presented to a number of individuals and groups to check for credibility and plausibility of the findings. This included supervisors, a PACT project speech and language therapist, a PACT project parent, and seminar groups of mixed professionals working with parents, and of qualitative methodologists.

Following the thematic analysis the additional step of extracting the descriptive statistics for the different themes from Atlas.ti was taken. These statistics were to provide further information for the instrument development phase.

2.6.3 Analysis of parent interview data

Background: Parents of children with autism have been reported to hold a wide range of possible beliefs about the causes of autism (Harrington, Patrick et al. 2006, Mercer, Creighton et al. 2006, Selkirk, McCarthy Veach et al. 2009, Al Anbar, Dardennes et al. 2010, Russell, Kelly et al. 2010) that often differ from those of professionals (Stone and Rosenbaum 1988). Research suggests that these causal beliefs may impact on treatment preferences (Al Anbar,
Dardennes et al. 2010). Although no studies directly investigating the relationship between causal beliefs and alliance have been found in the wider alliance literature there is some evidence that treatment preferences may impact on alliance (Iacoviello, McCarthy et al. 2007). Since agreement on the goals and tasks of therapy theoretically underpins alliance it is possible that certain parental causal beliefs will associate with parent-rated alliance in different therapies. No studies have so far directly investigated whether parents’ beliefs about the cause of autism in their child affect alliance with a specific type of treatment. Causal beliefs may therefore be a baseline variable to include in multivariate analysis of factors associating with alliance. In order to do this the causal beliefs held by parents needed to be explored and categorised into variables suitable for further empirical analysis.

In the literature causal beliefs have been categorised both in terms of aetiology e.g. genetic factors, vaccination e.g. Harrington, Patrick et al. (2006) and Dardennes, Al Anbar et al. (2011) and locus of cause i.e. whether the parent attributes blame to external or internal (self-blame) factors e.g. Dale, Jahoda et al. (2006). The PACT dataset contains a rich description of parents’ causal beliefs from a large sample of parents of varying demographic background and represents an opportunity to update the literature on autism causal beliefs of UK parents, both in terms of aetiology and the internal/external construct.

The exploration of parents’ causal beliefs and their categorisation for use as variables was therefore important preparatory work for the quantitative phase of the research, where they were to be included in multivariate analysis of factors associating with alliance.

**Research questions**

1. What do parents of children with autism believe are the causes of autism in their child?  
2. To what extent do parents of children of autism hold internal, external or mixed loci of cause?  
3. How can parents’ causal beliefs best be categorised for inclusion in empirical analysis of associations with alliance?

**PACT data available (see Section 2.1):** Causal belief interview data

**Methods employed and rationale:** This section focuses on the rationale for the choice of methods; procedural detail is covered in Paper 1 in the Results Chapter, Section 3.2.
Aetiology of belief: A review of the literature indicated that many studies collect causal belief data by way of checklist or questionnaire, usually with the option of the addition of comments or an ‘other’ box for beliefs not on the list. The PACT data available were in the format of recorded responses from an interview; given this two main methods were possible. The first approach would have been to take a checklist, either directly from a previously published study or theoretically created based on a collation of findings from previous studies, and use this as the basis for a content analysis of the parents’ responses. A second possibility was to employ a more inductive approach, and generate causal belief categories, to be used directly as variables, from the interview data. An initial read through the data indicated that the interview method of collection had revealed a wide range of causal beliefs and that the more inductive approach would potentially allow the beliefs to be explored, described and categorised more fully than imposing a top-down coding scheme. Thematic analysis (Braun and Clarke 2006) as previously described in Section 2.6.2 above, was chosen as an appropriate method for this part of the research.

Locus of cause: A review of the literature revealed that a suitable scheme for coding the internal/external locus of cause construct already existed and could be easily adapted for use in this study. Dale, Jahoda et al. (2006) successfully employed a scheme (adapted from Elig and Frieze (1977) and based on Weiner (1985)’s definitions of these constructs) in their study of parental attributions in autism. A code of 1 is given when the parent’s discussion of cause indicates that they hold themselves to blame in some way for their child’s autism e.g. for not spending sufficient time with child as a baby. A code of 3 is given when the parent places blame on a specific external cause e.g. complications during the birth process. Parents who hold mixed beliefs are given a code of 2. For this research a minor adaptation to the scheme was made to include a category for parents who offered no causal beliefs – in the original scheme these parents were grouped together with parents offering mixed internal/external causes. Content analysis of the causal belief records using this scheme was therefore selected as an appropriate method for quantifying beliefs on the basis of their locus of cause.

Since the data from both analyses were to be used subsequently in quantitative analyses it was recognised that some check on the reliability of coding would be necessary. For the internal/external construct this could be achieved by a second coder directly double coding 25% of the sample using the same coding scheme. For aetiology the second coder was given a checklist of the categories produced by the thematic analysis and re-coded 25% of the sample using content analysis.
2.7 Instrument Development Phase

The findings of the qualitative analysis of session data were then used to inform the development of a video based quantitative scheme to code expression of parents’ perspectives, and the therapists’ responses to these, in a different, larger sample of PACT data. This scheme was called the Parental Perspectives Coding Scheme (PPCS).

Development of the PPCS

**Background:** The aim of the instrument development phase was to produce a scheme to reliably code the expression of parental perspectives and the therapist’s responses to these expressions as interaction variables to be used in empirical analysis of factors influencing alliance.

**Research Question:** Can a reliable coding scheme be developed from the findings of the qualitative analysis of intervention session data to quantify the expression of parental perspectives, and the therapist’s responses to these expressions, as variables for empirical analysis?

**Methods Employed and Rationale:** The findings of the qualitative analysis of parent-therapist dialogue in PACT sessions were used to develop a very specific scheme to measure the variable of interest in the alliance study. A two-step process was employed; 1) development of a draft scheme 2) formal piloting

1. **Development of draft scheme:** Findings and outcomes of both the qualitative analysis and the corresponding quantitative statistics (e.g. code frequency counts) were used alongside the literature to inform a number of design decisions in the development of the PPCS.

   **Items included in the PPCS:** The network diagram and quantitative descriptive statistics of the themes were examined together to determine which themes should be included as individual items in the PPCS and which might be merged or omitted. Key factors were the frequency of occurrence of codes in the theme and the extent to which there was evidence of sufficient variation between sessions to ensure an item based on the theme would differentiate sessions in a useful way.
Format of the PPCS: A number of factors were taken into account when developing the format and operation of the coding scheme, including the experience of coding during the qualitative analysis, examples in the literature of other video based coding schemes, and early piloting of different formats. Decisions on whether to use objective frequency counts or subjective evaluations, on whether to code items in terms of their frequency or quality, and on operationalising the scheme were made on this basis. The process was iterative, draft versions of the scheme were trialled on session data, with a second trained coder involved in the coding. Coding difficulties and differences were discussed and the scheme revised and retrialled. The final decisions made and the rationale for them are described in Paper 2 in the Results Chapter (Section 3.4).

Manualisation of the PPCS: A draft manual for the PPCS was written, using examples based on the quotations from the qualitative analysis of the PACT session data to illustrate each of the codes in the scheme.

2. Formal Piloting: Formal piloting of the draft PPCS was conducted on a further 9 sessions, randomly chosen from the same pool of PACT sessions as for the qualitative analysis. Each session was rated independently by two coders, myself and the second coder trained by myself. After the first 3 sessions any difficulties in coding and any coding disagreements were discussed – with particular focus on items where there were disagreements of more than one rating point. Some further minor revisions to the scheme and the manual were made at this point.

The remaining 6 sessions were then coded independently, with no further discussion between raters.

Analyses: Various methods of assessing and reporting reliability of quantitative coding schemes are found in the literature. Intra class correlations have been recommended for interaction coding schemes, such as the PPCS; point estimates are essentially equivalent to those obtained from Cohen’s kappa (also frequently used) but confidence intervals can be easily calculated and multiple raters incorporated (Fletcher, Mazzi et al. 2011, Kottner, Audige et al. 2011). The calculation of mixed effect (single measure) intra-class correlation coefficients (ICCs) was planned for each item to obtain a measure of the potential reliability of the instrument.
2.8 Quantitative Phase

2.8.1 Overview

The aim of the quantitative phase of the research was to explore relationships between observed alliance variables and the other variables of interest. Since the data was collected naturalistically, with no experimental manipulation of the variables of interest, a correlational design was appropriate. The quantitative phase had two steps.

1. **Descriptive and factor analyses of the alliance questionnaires:** The PACT alliance data were explored and factor analysed to create alliance variables.

2. **Investigation of baseline and process factors associated with alliance:** The PPCS scheme, developed from the findings of the qualitative phase (Section 2.7), was used to code a sample of session videos and create variables for the expression and integration of parental perspectives. These variables, along with the causal belief variables created from the qualitative analysis of parent interview data (Section 2.6.3), and other identified parent and therapist baseline variables, were analysed using correlational and regression techniques for associations with alliance.

2.8.2 Descriptive and factor analyses of the alliance questionnaires.

**Background:** There is a paucity of research on the nature, course and structure of parent-therapist alliance from which to make informed decisions on the use of parent-therapist alliance as a variable in further analyses. Studies with other client groups have shown that client and therapist rated data often do not correlate, suggesting that analyses should be done separately with each. Whether this was the case with this data set needed to be explored. Some studies in the literature have found alliance to remain stable across the course of therapy and so have used mean alliance in their analyses e.g. Kazdin, Whitley et al. (2006). Others have suggested that alliance varies and proposed that alliance as measured early in therapy is most predictive and therefore the more useful variable to study (Martin, Garske et al. 2000). As reported above, there were delays in commencing the collection of alliance data in the PACT trial, such that 15 cases have no alliance data available at time point 1. If the use of a mean score across the three time points could be justified it would make possible the inclusion of these cases in subsequent analyses.
Conceptualisations of alliance vary and although the importance of alliance across different types of therapy is generally recognised there is evidence that the manner in which it manifests itself within treatment varies (Webb, DeRubeis et al. 2011, Ulvenes, Berggraf et al. 2012). The PACT alliance questionnaires give a total alliance score. In order to explore possible associations with components of alliance, rather than just total score, a factor analysis of the PACT alliance questionnaires was needed to ascertain the underlying factors. Although based largely on the WAI, the PACT alliance questionnaires included items from another instrument, the FEQ. Additionally research on the WAI and other alliance questionnaires, discussed in the introduction, has questioned the accuracy of three factor structure of goal, task and bond on which the WAI is theoretically based, suggesting underlying dimensions may vary with different client groups and treatments.

**Methods and Analyses:**

1. **Associations between parent-rated and therapist-rated total scores:** Univariate correlations were selected as appropriate to investigate the relationship between parent-rated and therapist-rated total alliance scores and inform whether parent and therapist-rated data needed to be considered separately in subsequent analyses. For parametric data Pearson’s correlation was chosen; for non-parametric data Kendall’s tau was considered most appropriate since the data set was relatively small and a number of the scores had the same rank (Field 2009).

2. **Stability of alliance ratings over time:** Repeated measures ANOVA (one factor, total alliance score; 3 levels, time points 3, 6 and 9 months) was selected as an appropriate test to investigate whether the total alliance scores differed statistically across the three time points (T1, T2 and T3). Results were to inform whether use of a mean alliance score, as is frequently used in alliance research, would be justified in subsequent analyses.

3. **Therapist Differences:** Independent one way ANOVAS (one factor, total alliance score; 6 levels, therapists 1-6) were planned to investigate whether there were any significant between-therapist differences in a) their own ratings of alliance and in b) the alliance ratings given them by parents.

4. **Underlying factor structure:** Principal Components Analysis (PCA), with oblique (direct oblimin) rotation, on the time point 2 alliance data, was selected as an appropriate method for investigating underlying factors in the parent-rated and therapist-rated alliance questionnaires. The rationale for this choice of method is as follows.
The first consideration was whether the sample would be large enough to reliably carry out factor analysis. Since the data at the three time points cannot be considered independent, only alliance questionnaires from a single time point could reliably be used in a factor analysis. Time point T2 (6 months) had the highest number of completed questionnaires available for both parents (54) and therapists (64). On the face of it these are small samples to be considering for factor analysis. An often quoted rule of thumb suggests there should be 10 to 15 participants per variable so, with 22-26 questionnaire items; by this criterion the sample size would seem inadequate. However both Field (2009) and Gaskin and Happell (2014) discuss the issue of sample size in some detail, noting that it is not the participant to variable ratio that determines whether a solution is reliable, rather it is the size of the sample in combination with the magnitude of the factor loadings that is critical. Field quotes MacCallum et al. (1999) who suggest that relatively small samples (<100) can be adequate if all communalities are high (> .6) and there are relatively few underlying factors. Guadagnoli and Velicer (1988) suggest that if a factor has 4 or more loadings of greater than 0.6 then it is reliable regardless of the size of the sample. In addition the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) can be used to help determine whether the sample size is likely to be adequate; the test statistic lies between 0 and 1, the closer the value is to 1 the more likely that there are compact factors in the data and so the more appropriate factor analysis. Values below .5 are unacceptable, between .5 and .7 mediocre, anything above .7 is considered good (Field 2009). After consideration of the above it was deemed appropriate to attempt a factor analysis despite the relatively small sample size, provided attention was paid to the resulting factor loadings and communalities as discussed above, and to the KMO test statistic, before considering the analysis reliable.

Factor analysis can be either confirmatory or exploratory. Confirmatory factor analysis allows for a hypothesis about the factors to be tested; in this case it would have been possible to hypothesise that the items on the alliance questionnaires would cluster to form three factors, equating to Bordin’s goal, task and bond. Analysis would confirm whether this hypothesis holds within the sample data set. Exploratory factor analysis on the other hand makes no initial assumptions about the underlying structure but analyses the data directly for a possible solution. Given the ambiguity in the literature regarding the underlying structure of alliance, as discussed in the Introduction (Section 1.2.3) and the fact that there has not been a previous factor analysis of this specific questionnaire on which to base hypotheses, it was felt that an exploratory factor analysis was most appropriate for this data set.
Choice of method of exploratory factor analysis then depends on whether the aim is to simply describe the structure of the sample under analysis or to generalise results to the population as a whole (Field 2009). Given the relatively small sample, and the fact that this is believed to be the first such analysis of parent data in the context of a parent training intervention, it was decided that a descriptive analysis as provided by Principal Components Analysis (PCA) was most appropriate in this case. PCA decomposes the alliance variable into component parts, allowing components to be entered as individual variables in further analysis in this sample, as required, and enables initial hypotheses about the possible structure of alliance in this client group to be made. Any structure found however would need to be replicated in different samples and/or the hypotheses tested in confirmatory factor analysis before any inferences could be made beyond the sample studied; this restriction was considered acceptable given the exploratory nature of the thesis as a whole.

A final consideration in planning the PCA was whether a rotation would be applied and which would be most appropriate. Either orthogonal or oblique rotations can be applied to PCA to maximise the loading onto the underlying components. Oblique rotations allow for some correlation between the factors and are used when there is theoretical reason to expect that the factors are not independent. There is strong evidence from the theoretical alliance literature and from previous factor analyses on other data sets to suggest that any factors are likely to be inter-related to some degree (Hatcher and Gillaspy 2006) and so an oblique rotation (direct oblimin) was considered most appropriate.

2.8.3 Investigation of baseline and process factors and alliance

*Background:* The quality of alliance has been associated with outcomes in a wide range of therapies including those involving parent training (Horvath, Del Re et al. 2011, Shirk, Karver et al. 2011). Investigation of factors associated with high alliance may help clinicians in understanding and improving their alliances with parents. The aim of the quantitative phase of the research was to explore factors associated with alliance with parents which have been little studied previously. These included both baseline characteristics and process variables, some of which had been investigated previously in the literature for other client groups, others of which were being newly proposed. Given the complexity of alliance as a construct and the variety of variables to be incorporated, a method allowing the investigation of a combination of predictor variables was required.
Research Questions

1) Are parent prior causal beliefs and other baseline variables associated with quality of therapeutic alliance?
2) Is the quality of belief and perspective-sharing with the therapist in the early sessions of therapy associated with quality of therapeutic alliance?

The following predictions were made:

Prediction one: Parent-therapist dialogue that contains greater parental expression of underlying perspectives will be associated with higher therapeutic alliance as rated by a) parents and b) therapists.

Prediction two: Parent-therapist dialogue that contains greater therapist integration of expressed parental perspectives will be associated with higher therapeutic alliance, as rated by a) parents and b) therapists.

PACT Data used (see Section 2.1):

- PACT alliance data
- Participant data
- Causal belief data
- Therapist fidelity data
- Intervention session digitally recorded videos

Method:

Baseline Variables: Data for demographic variables were extracted from the PACT database and categorical variables created. Dichotomous causal belief variables were created based on the thematic analysis carried out during the qualitative phase of the research e.g. MMR Belief (Yes/No). Average therapist fidelity scores were also extracted from the PACT database.

Process Variables: Video coding using the PPCS. To create variables for the expression and integration of parental perspectives, parent-therapist in-session dialogue was coded using the Parental Perspectives Coding Scheme (PPCS) which was developed from the qualitative analysis during the instrument development phase of the research. Due to resource restrictions it was not possible to code all 77 cases for PPCS variables. To maximise the possibility of finding genuine effects a purposive high-low parent-rated alliance sample was selected to include the ten sessions with the highest parent ratings of alliance and the ten
sessions with the lowest ratings. For these 20 cases all six sessions up to the 3 month alliance time point were rated on the PPCS (120 sessions in total). 10% of cases were double coded by a second coder for reliability.

**Alliance Variables:** Alliance variables were created on the basis of the explorations of alliance data described in Section 2.8.2.

**Masking:** Since all the coding and the analyses of the data for the quantitative phase were being done primarily by the same person, there was a danger that bias could be introduced unless steps were taken to minimise this. At the start of the research an independent colleague randomly allocated new ID numbers to all the cases on the PACT database; therapists were also randomly allocated a number. All preliminary analyses of the primary data were done using the new IDs, with the author blind to the original PACT IDs. Once the ten highest and ten lowest alliance cases had been identified and selected for the high/low purposive sample a second independent colleague cross-checked the new IDs with the original PACT IDs and generated a randomly mixed list of the cases in the PPCS sub-sample, identified only by their original PACT IDs. This meant that all coding of the videos could be done blind to alliance status i.e. the coders did not know whether the case was a high or low alliance case. Unblinding occurred only after all the coding and reliability analyses had been completed and the PPCS variables were ready to be entered into the database.

**Analysis Plan**

The analysis plan was formulated to make best use of the available sample. Associations reported in alliance process research are generally small e.g. a meta-analysis of the attachment-alliance association reported mean weighted r ranging from .121 to .137 (Bernecker, Levy et al. 2014). In an exploratory study with a small sample such as this there is a strong possibility of making type-2 errors, i.e. failing to find effects that genuinely exist. To maximise the possibility of finding genuine effects a staged approach to analysis was taken.

1) Using the full PACT sample of 77 cases a series of univariate analyses of associations between alliance and known potential factors from the literature were planned; specifically parent demographic factors (parent level of education, parent ethnicity, family socio-economic status), parent causal beliefs, and therapist factors (therapist fidelity). For categorical variables independent samples tests with alliance as the dependent variable and factors as the grouping variable were selected i.e. t-test/Mann-Whitney U for variables with 2 categories;
ANOVA/Kruskal-Wallis for variables with more than 2 categories, depending on normality of the data. For continuous variables Pearson’s correlation or Kendall’s tau were selected. Analyses were planned using both the total alliance score, and the component scores. Only those variables found to show significant associations were put forward for inclusion in the multivariate models, thus reducing the number of variables in the final analyses and improving the power of the study. Although multiple univariate testing can result in type-1 errors, i.e. finding an effect that does not exist, the second step of entering the variables into a regression model overcomes this issue.

2) Using the 20 cases in the PPCS high–low alliance subsample a series of univariate analyses of associations between alliance and PPCS variables was planned using appropriate tests as above. Again only variables with significant univariate associations were to then be included in the multivariate models.

3) Multiple regression analyses were planned with the outcome variables, parent-rated and therapist-rated alliance, and any predictor variables found to be significant in the univariate analyses. Hierarchical regression was planned, entering predictor variables in order as follows: step 1, demographic and therapist factors for which there was prior corroboration in the literature; step 2, causal belief variables; step 3, PPCS parental perspectives variables.
CHAPTER 3

RESULTS
3.1 Structure of the Results Chapter

The Results Chapter of the thesis is presented as three papers in a format suitable for publication, with additional sections reporting results not covered in the papers. Figure 2 shows how the papers map onto the research design.

Section 3.2 presents Paper 1, *Parents’ causal beliefs about autism*. The paper reports on the qualitative analysis of the parent interview data and the findings related to aetiology of parental causal beliefs and locus of cause. It also includes an additional investigation of whether causal beliefs associate with demographic factors.

Section 3.3 reports in detail the findings of the qualitative analysis of PACT session videos. Discussion of the findings is included in the overarching discussions in Chapter 4.

Section 3.4 presents Paper 2, *Development of the Parental Perspectives Coding Scheme (PPCS)*. This paper combines work from the qualitative and instrument development phases. It reports on the development and pilot testing of the Parental Perspectives Coding Scheme (PPCS). The full manual for the coding scheme is included in Appendix B, rather than the main body of the thesis, so as not to interrupt the flow of the narrative.

Section 3.5 reports the descriptive and factor analyses of the alliance questionnaires. These analyses informed the creation of the total and component alliance variables used in the subsequent analyses.

Section 3.6 presents Paper 3, *Precursors of therapeutic alliance in a parent mediated intervention for autism*. This paper draws on work from the quantitative phase of the research. It reports the investigations into the relationships between alliance and the baseline and process parent and therapist variables, including variables for the expression and integration of parental perspectives within the session as measured on the PPCS.
Figure 2 Research design and results papers/sections

- **PACT DATA**
  - Initial Parent interview
  - Demographic data
  - Ave. Therapist Fidelity Ratings

- **QUALITATIVE PHASE**
  - Thematic Analysis

- **PROCESS**
  - PACT Session Videos
  - Development of PPCS

- **ALLIANCE**
  - Parent Rated Alliance Questionnaire
  - Therapist rated Alliance Questionnaire

- **INSTRUMENT DEVELOPMENT**
  - Video coding using PPCS

- **QUANTITATIVE PHASE**
  - Causal Belief Variables
  - Demographic Variables
  - Therapist Fidelity Variable
  - PPCS Variables
    - *Expression (IOC; PAS; PSD)
    - *Integration (IOC; PAS; PSD)
  - Parent Alliance
    - Total Alliance
    - *Belief in therapist
    - *Belief in Treatment
  - Therapist Alliance
    - Total Alliance
    - *Bond
    - *Right Treatment
    - *Parent Engagement

- Univariate Correlations
- Multiple Regression Models
  - *Parent Alliance
  - *Therapist Alliance

Paper 1: Section 3.3
Paper 2: Section 3.5
Paper 3: Section 3.5

Figure 2: Research design and results papers/sections
3.2 Paper 1

Parents’ causal beliefs about autism.

Abstract

Background: Conclusive scientific evidence on the causes of autism is still sought, though a genetic contribution is generally accepted. Parents of children with autism, left without definitive explanation, hold their own explanatory models. To date, few studies of parent causal beliefs have been conducted with a demographically diverse UK sample. Methods: 77 parents participating in a psychosocial communication intervention trial were asked ‘What do you believe to be the cause of autism in your child?’ Responses were categorised according to a) locus of cause (internal/external/mixed) and b) aetiology of cause using content and thematic analysis respectively. Chi-square analyses with demographic variables were undertaken. Results: 31.4% of parents reported no specific beliefs about the cause of autism in their child. Most (41.4%) cited multiple possible causes, 8.6% gave a single internal cause, 18.6% an external cause. The MMR vaccine was the most frequently mentioned potential cause (31.4%), followed by genetics (24.3%) then pregnancy/birth related factors (20.0%); other factors e.g. toxin exposure, child illness and allergies, environment and upbringing, and fate had much lower rates (each <8%). Whether parents cited a specific causal belief or not did not generally associate with demographic factors. However associations were found between ethnicity and pregnancy/ birth related belief (p<0.05) and between family income and genetics belief (p<0.05). Conclusions: Parents of children with autism in the UK individually hold a range of causal beliefs, which are not necessarily in line with professionally accepted evidence. Beliefs reflect the lack of definitive information available; parents show uncertainty and a propensity to multiple beliefs, including epigenetic explanations. Given accumulating evidence that causal beliefs may influence approach to intervention, clinicians should consider ascertaining and openly discussing beliefs with parents.

Introduction

Autism is a neurodevelopmental disorder, typically diagnosed in early childhood, and estimated to affect 1% of the UK population (Baird, Simonoff et al. 2006). Despite extensive research the causes of autism are not fully understood, though there is general acceptance in the scientific community that genetics plays an important role, possibly interacting with environmental factors (Altevogt, Hanson et al. 2008, Herbert 2010, Eapen 2011). In this
context it is not surprising that parents of children with autism have been found to hold a range of views on what may have caused autism in their child. Studies to date have examined beliefs both in terms of the aetiology of the belief e.g. genetic, biomedical, environmental (Harrington, Patrick et al. 2006, Dardennes, Al Anbar et al. 2011) and whether they consider the locus of the cause to be internal or external (Dale, Jahoda et al. 2006).

Previously published studies of parents’ causal beliefs give limited information about the beliefs of parents based in the UK. Most recent studies were carried out with samples from the United States and Canada (Goin-Kochel and Myers 2005, Harrington, Patrick et al. 2006, Mercer, Creighton et al. 2006, Selkirk, McCarthy Veach et al. 2009); a further comprehensive study was conducted with French participants (Dardennes, Al Anbar et al. 2011). Of the UK based studies, Dale, Jahoda et al. (2006) examined only the locus of cause construct, and the findings of a study by Russell, Kelly et al. (2010), although interesting, seem unlikely to be representative; their sample data comprised letters from parents to a research group widely reported in the media to be investigating potential environmental causes. Those studies that give information on sample demographics describe their participants as mainly white, well-educated and middle class. Research with more demographically diverse samples may yield a wider range and different pattern of causal beliefs. There is some limited evidence that causal beliefs of parents of children with disabilities or mental health disorders may vary with cultural background (Yeh, Hough et al. 2004, Ravindran and Myers 2012) and studies with specific cultural groups highlight propensities to certain causal beliefs, in particular more prominent incidence of supernatural or fatalistic explanations in some cultures (Mandell and Novak 2005, Mirza, Tareen et al. 2009, Shyu, Tsai et al. 2010). Socio-economic status and level of education may influence the extent to which parents of children with autism access and assess information about causes (Mackintosh, Myers et al. 2005), whilst geographical location may influence the initial information given by local health services (Dale, Jahoda et al. 2006) and by local support/advocacy groups.

An understanding of parents’ causal beliefs in autism is potentially important as evidence is accumulating that beliefs associate with a range of factors including, for example, levels of maternal stress (Mickelson, Wroble et al. 1999, Dale, Jahoda et al. 2006) and family planning choices (Selkirk, McCarthy Veach et al. 2009). Although there has been little direct research into the effects of causal beliefs on intervention, causal beliefs have been found to influence the type of intervention parents choose for their child (Cho 2009, Al Anbar, Dardennes et al. 2010). Other authors have speculated that there may be a relationship between beliefs and
engagement in treatment e.g. beliefs in fatalism or God’s will may lead parents to believe there is nothing to be done (Mandell and Novak 2005, Mirza, Tareen et al. 2009), whilst beliefs in biologically based causes may, for example, result in lesser engagement with behavioural or educational interventions (Ravindran and Myers 2012). This investigation of parental causal beliefs was part of the preliminary analyses of a wider study investigating possible associates of therapeutic alliance, defined as the quality of the collaborative working relationship between the therapist and client (Bordin 1979), in a parent-mediated intervention for autism (Taylor, Callery et al., in preparation). The study dataset, drawn from the Pre-School Autism Communication Trial (PACT) and described below, allowed for exploration of the range of autism causal beliefs held by parents in a demographically varied UK based sample.

**Method**

**Setting:** The study uses data collected during the Pre-School Autism Communication Trial (PACT), a randomised control trial of a psychosocial parent-mediated communication intervention carried out at three UK sites (Manchester, London and Newcastle Upon Tyne) in the period 2006-2009 (Green, Charman et al. 2010). The PACT study was approved by the Central Manchester Multi-Centre Research Ethics Committee and all participants gave written informed consent.

**Sample:** The sample included all 77 parents who undertook the PACT intervention. All intervention parents had children with a diagnosis of core autism, aged between 2;11 and 4;11 at the start of treatment. Families were referred to the trial by their GP or paediatrician.

**Procedures:**

**Demographic data:** Demographic data were collected by the trial’s three research assistants as an integral part of recruitment into the trial. Data were available for intervention parent ethnicity (12 categories), family annual income, (3 categories), intervention parent highest level of qualifications level (5 categories) and research centre (3 categories). Due to the relatively small numbers in some categories, data for family annual income were collapsed into two categories (<£40,000 p/a; >£40,000 p/a) for ethnicity into two categories (white/non-white) and for highest qualifications into two categories (has post-16 qualifications, i.e. higher than GCSE or equivalent/ has no post-16 qualifications).

**Causal Belief Data:** Causal belief data were collected prior to the start of intervention by the research speech and language therapist allocated to the family during an introductory home
Therapists conducted a semi-structured interview with parents, including a specific open-ended question about their beliefs about the cause of their child’s autism; ‘What do you believe was the cause of autism in your child?’ A written summary of the parent’s response to this question was recorded on a standardised interview sheet. Interviews took place between September 2006 and March 2008.

**Coding**

The written records of parents’ responses to the causal beliefs question were extracted from the therapist interview sheets and coded for both locus of cause and aetiology of cause.

**Locus of cause:** Content analysis was used to code the extracts for locus of cause. The scheme employed by Dale, Jahoda et al. (2006), which is based on Weiner (1985)’s definitions was selected. An adaptation was made to include a separate category for parents who reported holding no causal belief; these were combined with mixed beliefs in the original scheme. The scheme is illustrated in table 1.

A code of (0) was given to cases where parents reported holding no beliefs about the cause of autism in their child. A (1), internal locus of cause, was given when the parent clearly indicated self-blame; any single aetiological cause could give rise to an internal attribution if the parent indicated that they felt that they were to blame for allowing it to happen. For a (3), external locus, the parent needed to have cited a single external cause as being specifically to blame e.g. environmental toxins, with no indication of self-blame attached. Where parents cited a number of potential causes with no clear blame a (2) mixed locus was coded. Thus each case was given a single locus of cause code; 0, 1, 2 or 3. A random selection of 25% cases (17 cases) were coded by a second trained coder for reliability; percentage agreement on code (0, 1, 2 or 3) allocated was 88%.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Clearly states hold no causal belief</td>
</tr>
<tr>
<td>1</td>
<td>Attributes only to internal causes and clearly indicates self-blame</td>
</tr>
<tr>
<td>2</td>
<td>Attributes to mixture of causes/ no clear element of blame of self/others</td>
</tr>
<tr>
<td>3</td>
<td>Attributes only to external cause and clearly indicates blame</td>
</tr>
</tbody>
</table>

**Aetiology of cause:** Thematic analysis (Braun and Clarke 2006) was used to describe the aetiology of the causal beliefs given by parents. Qualitative analysis software, Atlas.ti 6 (2011) was employed to manage the process. During the complete coding step all the recorded responses were examined and initially assigned detailed codes describing the beliefs mentioned e.g. ‘lack
of oxygen at birth’. In the next step individual codes were grouped thematically according to similarity of cause e.g. Pregnancy/Birth Complications.

Categorical belief variables to be used in further statistical analyses were then created based on the themes generated by the thematic analysis. Since a number of parents cited more than one possible causal belief, each belief category was treated as an individual dichotomous belief variable; if a belief consistent with the causal category (e.g. genetics) was mentioned as possible by the parent the variable was coded 1 for that case, otherwise it was coded as 0. Thus each case was coded as 1 or 0 for each of the causal belief variables and category membership for each belief variable was independent.

A second coder used the developed categories to recode 25% of the cases (17) by content analysis. Percentage agreement was calculated for the code (0 or 1) given to each belief category for each case (136 codings). Agreement was 95%.

Statistical Analyses

**Associations with demographic factors:** A series of chi-square calculations were conducted to investigate associations between individual causal belief categories and the demographic categories of ethnicity (white/non-white), qualifications (no post-16/post-16), family annual income (<£40,000 p/a, >£40,000 p/a) and research centre (London, Manchester, Newcastle). Fisher’s exact test and the likelihood ratio were used as they are more accurate when sample sizes are small, as was the case for individual beliefs (Field 2009). Given the exploratory nature of the study corrections for multiple testing were not applied (Bender 1998, Perneger 1998). The small sample sizes in individual categories meant that log linear analyses combining variables were not possible.

Results

**Sample Demographics:** The 77 cases in the sample were distributed across the three intervention sites, Newcastle, Manchester and London. Table 2 describes the demographic data for the sample. A response to the causal beliefs question from the intervention parent was recorded for 70 of the 77 cases; 68 were mothers and 2 fathers.
Table 2. Demographic data for 77 PACT intervention parents
From Green, Charman et al. (2010)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Valid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Income Category</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=40K</td>
<td>43</td>
<td>56.6%</td>
</tr>
<tr>
<td>&gt;40K</td>
<td>33</td>
<td>43.4%</td>
</tr>
<tr>
<td>Missing Data</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Intervention Parent Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (Any Background)</td>
<td>51</td>
<td>68.0%</td>
</tr>
<tr>
<td>Non-White*</td>
<td>24</td>
<td>32.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Intervention Parent Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No post-16 qualifications</td>
<td>21</td>
<td>28.4%</td>
</tr>
<tr>
<td>Post-16 qualifications</td>
<td>53</td>
<td>71.6%</td>
</tr>
<tr>
<td>Missing Data</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Centre</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>26</td>
<td>33.8%</td>
</tr>
<tr>
<td>Manchester</td>
<td>26</td>
<td>33.8%</td>
</tr>
<tr>
<td>Newcastle</td>
<td>25</td>
<td>32.5%</td>
</tr>
</tbody>
</table>

*Caribbean (2); African (13); Any other African (1); Pakistani (2); Any other Asian (1); Any Mixed (1); any other ethnic background (3)

**Causal Beliefs:** Of the parents interviewed 22 (31.4%) stated that they held no strong beliefs about the causes of autism in their child and gave no possible cause. Of these, 3 specifically claimed either to not be concerned about cause or to not want to think about it, preferring to deal with the present situation than dwell on it. In contrast 2 parents expressed an explicit wish for an answer.

A number of other parents started by stating that they had no strong beliefs but then went on to mention causes that they thought most likely. 20 parents (28.6%) gave 2 or more potential causes; the maximum number of possible causes cited was 4.

**Locus of Cause:** Of those who discussed possible causes the majority, 31 in total (44.3%), were coded as having a mixed locus, i.e. they cited more than one possible cause and/or did not specify definite internal or external blame.

6 parents (8.6%) attributed an internal cause i.e. they clearly indicated that they held themselves to blame either directly, or by having done something that they felt increased the chances of an otherwise external cause affecting their child. Such causes included self-blame for having consciously chosen to give the child the MMR (mumps, measles and rubella) vaccine rather than single vaccines, not spending enough time with the child and not giving the child enough opportunity to interact with others. Non-specific self-blame was also evident i.e. parents feeling that it must be something they had done though they didn’t know what.
A further 13 (18.6%) clearly blamed a single external cause, mostly again the MMR vaccine, but also complications in pregnancy and birth that they felt weren’t handled well, and child accidents.

Aetiology of Cause: Complete coding of parents’ responses gave 26 individual codes, each representing a specific detailed cause. The thematic grouping according to similarity of aetiology resulted in 8 main categories of causal belief e.g. codes relating to early environment and upbringing, or to factors around pregnancy and birth. These categories are listed in table 3 along with figures for the number and percentage of parents subscribing to each particular causal belief, examples and additional comments. Interestingly many parents also expressed beliefs about what did not cause autism in their child; these are detailed in the table in the ‘Unlikely Cause’ column

Table 3. Parents’ causal beliefs by category

<table>
<thead>
<tr>
<th>Cause</th>
<th>Possible Cause</th>
<th>Additional comments</th>
<th>Unlikely Cause</th>
<th>Additional comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR/Vaccine</td>
<td>N=22 (31.4%)</td>
<td>2 MMR single strong belief. 20 mentioned as possible; 7 of these described regression after MMR</td>
<td>N=14 (20%)</td>
<td>5 described noticing symptoms before MMR given. 2 stated single vaccines given.</td>
</tr>
<tr>
<td>Genetic/Hereditary</td>
<td>N=17 (24.3%)</td>
<td>11 gave examples of wider family members who they felt also showed autistic traits. 12 also mentioned an environmental cause; 5 of these specifically discussed genetics as a predisposition for other factors e.g. MMR</td>
<td>N=6 (8.6%)</td>
<td>2 stated could see no evidence in family for genetic cause. 1 had had genes checked</td>
</tr>
<tr>
<td>Pregnancy/Birth</td>
<td>N=14 (20.0%)</td>
<td>Examples: antibiotics/fertility treatment in pregnancy; difficult pregnancy; oxygen deprivation at birth; difficult labour</td>
<td>N=1 (1.4%)</td>
<td>1 stated no differences between pregnancy/birth with child and her other children</td>
</tr>
<tr>
<td>Gut/Diet related</td>
<td>N=6 (8.6%)</td>
<td>Examples; leaky gut, gluten, wheat dairy and casein</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fate</td>
<td>N=6 (8.6%)</td>
<td>Examples; reincarnation, bad luck, child’s destiny, just fate</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Child Illness/accident</td>
<td>N=5 (7.1%)</td>
<td>Examples; child falls; post virus/flu; immune system breakdown</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Early Home Environment/upbringing</td>
<td>N=4 (5.7%)</td>
<td>Examples: frequent house moves and family changes; child not spending enough time with other children; not giving child enough time when little</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Heavy Metals/Toxins</td>
<td>N=2 (2.9%)</td>
<td>Examples: Metal poisoning</td>
<td>N=1 (1.4%)</td>
<td>Child had been tested; possible belief before testing disproved.</td>
</tr>
<tr>
<td>No Cause Given</td>
<td>N=22 (31.4%)</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

From the views of intervention parents of 70 cases. Percentages represent percentage of parents who cited a particular cause: some parents gave more than one cause so percentages do not add up to 100%.
Associations with Demographic Factors

*Locus of cause:* The small number of parents attributing specific internal (8.6%) or specific external (18.6%) loci of cause made it inappropriate to use this internal/external construct to analyse the data further for associations with demographic factors.

*Aetiology of cause:* Numbers of parents ascribing to five of the causal categories were too small for analysis; these were Gut/diet, Fate, Child illness/accident, Early home environment and Heavy metals/toxins. Analyses with demographic factors were therefore carried out for the 3 belief variables; MMR/vaccine, Genetics and Pregnancy/birth. Results are tabulated in table 4.

A significant association was found between family income level and belief in genetic factors; \(\chi^2(1) = 6.289, p<0.05\). Based on odds ratio calculations parents with a family income of less than £40K per annum were 4.8 times more likely to cite genetic beliefs as a possible cause for their child’s autism than parents with a family income of more than £40K per annum.

A borderline significant association was found between intervention parent ethnicity and a belief in pregnancy/birth related factors; \(\chi^2(1) = 5.136, p=0.05\). Odds ratio calculations showed that white parents were 7.1 times more likely to consider pregnancy and birth factors a possible cause than non-white parents.

All other associations tested for were non-significant.

Table 4. Associations between causal belief categories and demographic categories.

<table>
<thead>
<tr>
<th></th>
<th>MMR/ Vaccine</th>
<th>Genetics</th>
<th>Pregnancy/Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Exact</td>
<td>Statistic</td>
</tr>
<tr>
<td>Family Income</td>
<td>.227</td>
<td>.788</td>
<td>6.289</td>
</tr>
<tr>
<td>N=69, df =1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualifications</td>
<td>.024</td>
<td>1.000</td>
<td>.163</td>
</tr>
<tr>
<td>N=67, df=1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.418</td>
<td>.566</td>
<td>.632</td>
</tr>
<tr>
<td>N=68, df=1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centre</td>
<td>.572</td>
<td>.713</td>
<td>1.154</td>
</tr>
<tr>
<td>N=70, df=2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Fisher’s Exact Test; 2 sided sig * \(p<0.05\)

**Discussion**

These findings describe the range of causal beliefs held by a medium sized sample of parents of children with autism in the UK, during the period September 2006-March 2008. The parents came from a range of socio-economic and ethnic backgrounds and were diagnosed, and therefore informed about autism, by professionals from a number of teams across the
UK. This contrasts with previous studies that have reported their samples to be either mainly middle class, white and educated (Harrington, Patrick et al. 2006, Mercer, Creighton et al. 2006, Al Anbar, Dardennes et al. 2010) or all diagnosed by the same team in one area (Dale, Jahoda et al. 2006). The parents did choose to be involved in a psychosocial intervention trial, and so may not be wholly representative of the range of parents of children with autism in the UK. However their primary reason for taking part in the research was to be involved in testing out the intervention, rather than to give their views on causal beliefs, and as such the views represented are likely to be typical of the population.

As in the Dale, Jahoda et al. (2006) UK study most parents (75.7%; N=53) remained open minded about cause, either considering a number of causes as possible or giving no causal beliefs.

In terms of locus of cause, the percentage of parents who attributed an internal locus of cause (8.6%; N=6) is slightly lower than the 12.5% reported in the Dale, Jahoda et al. (2006) study. Higher rates of internal attributions have also been reported in studies for other forms of childhood disability, for example 16.7% reported in parents of babies born with cleft, lip and palate (Nelson, O'Leary et al. 2009). It is possible that the method of data collection used, face to face at first meeting with the parent, meant that some parents were not yet secure enough in their relationship with the therapist to discuss internal attributions, so the figure may be an under estimate.

A wide range of aetiologies of causal beliefs was uncovered by the thematic analysis. Vaccination, most specifically MMR, featured in the largest percentage (51.4%; N=36) of parents’ discussions about cause – mentioned either as something they considered to be possible (31.4%; N=22), or as something they believed to be unlikely (20%; N=14). The suggestion of a link between autism and MMR in 1998 resulted in huge public concern in the UK (Burgess, Burgess et al. 2006). Evidence suggests that this persisted, though diminishing, into the mid 2000’s (Smith, Yarwood et al. 2007) and that MMR remained a worrying issue even for parents who had chosen to immunise their children (Casiday, Cresswell et al. 2006, Smith, Yarwood et al. 2007). Although in this sample only two parents were reported to be certain that MMR was to blame for their child’s autism, a further twenty cited it as either a possible cause or something they could not dismiss, seven of whom described regression in their child after the vaccination. Two contemporaneous US based studies, Harrington, Patrick et al. (2006) and Selkirk, McCarthy Veach et al. (2009) found a similar proportion of parents ascribing vaccines as a possible cause (29% and 27.3% respectively), whilst Mercer, Creighton
et al. (2006), reporting on data collected in 2003/4 in Canada, quote a higher level of belief at 40.0%. This suggests that although the claims about the possible link between MMR and autism were being discredited by the scientific community, and beliefs in the general population about the risks of MMR were diminishing, it remained a possibility in the minds of many parents whose children had subsequently been given a diagnosis of autism.

At the same time fourteen parents (20%) in this study specifically mentioned that MMR was unlikely to be to blame for their child’s autism; in some cases parents stated that the child had been given single vaccines, in others the parents reported having had the feeling that something was not right before the vaccine had been given.

Genetic explanations were the second most discussed category, featuring in 32.9% (N=23) of parent’s responses. Seventeen parents (24.3%) cited genetics as a possible cause, fourteen of whom gave examples of family members who they felt may have autistic traits. The proportion of parents ascribing genetics as a cause in this study is significantly lower than in other published studies with contemporary data. Mercer, Creighton et al. (2006), reporting on data collected in Canada in 2003/4, found the vast majority of respondents (90.2%) subscribed to genetic causes; Selkirk, McCarthy Veach et al. (2009) in the US, based on data collected in 2007, found genetics to be the most prevalent perceived cause (72.7%), and, although they do not give percentages, Dardennes, Al Anbar et al. (2011) found genetics to be the most highly rated and frequently cited causal factor in their French study. Both the Mercer and Selkirk studies were however part of research into perceptions of recurrent risk in having another child with autism and may have attracted a sample more inclined to genetic explanations.

This study found that there are also parents who openly remain unconvinced by genetic explanations even though they may acknowledge that it is current medical opinion. In two of these five cases parents specifically stated that they could see no evidence for a genetic explanation in their family, suggesting that for some people acceptance of genetics as a possible cause may be determined by whether it makes sense in the context of their known family. Conversely Dardennes, Al Anbar et al. (2011) report that 29 out of the 47 people in their study who gave genetics as a possible cause wrote ‘genetic’ in Other Causes rather than ticking the item Hereditary/ Runs in my Family, which might point to an acceptance of genetic explanations despite lack of evidence within their own family.
Pregnancy and birth related factors were also frequently cited as potential causes in this sample (20.0%). This finding is in keeping with Russell, Kelly et al. (2010) who reported a range of lay explanatory models based on technological/medical advances around pregnancy and birth. In this study taking antibiotics or fertility treatment during pregnancy were both cited as possible causes and a number of parents discussed complications during birth such as long labour. At the time these belief data were collected research into a range of obstetric factors was ongoing but inconclusive (Glasson, Bower et al. 2004) and may have influenced parents’ beliefs.

Other causes, including child illness/accident, exposure to toxins/heavy metals, early environment/upbringing and fate were cited by a much smaller proportion of parents; each being mentioned by 8% (N=6) or less of parents, and none being cited as a single definite cause. Taken together though, this represents 32.6% of parents who consider one or more of these less commonly reported and disparate explanations as possible causes. This finding is in keeping with Selkirk, McCarthy Veach et al. (2009) who similarly uncovered a high incidence (41.8%) of individual unusual beliefs through qualitative analysis of open-ended questions. The diversity of beliefs perhaps reflects a psychological need for explanation that is not necessarily dependent on scientific evidence. Some of the beliefs cited were the subject of ongoing inconclusive research investigations e.g. the possible contributions of environmental toxins and pollutants (Larsson, Weiss et al. 2009, Desoto and Hitlan 2010, Kalkbrenner, Daniels et al. 2010, Blanchard, Palmer et al. 2011). Others reflect a carry-over from historic theories that held parents to blame e.g. beliefs in effects of early upbringing.

Contemporaneous studies have reported on parents continued feelings of guilt/blame (Mercer, Creighton et al. 2006, Crampton 2008).

In more recent years increasing focus in the scientific literature has been put on the role of epigenetic processes in the causes of autism (Altevogt, Hanson et al. 2008, Herbert 2010, Eapen 2011). The underlying theory is that genetics and the environment interact, with environmental factors influencing how the autism genotype is expressed. In this context environmental factors might include any of the causes other than genetics discussed above i.e. vaccines, pregnancy factors, toxins etc. In this study twelve of the seventeen people (70.6%) who cited genetics as a possible cause also cited a possible environmental cause; five of these explicitly described a genetic predisposition triggered by another factor such as MMR or a difficult birth. Goin-Kochel and Myers (2005) reported similar examples, with 14.1% of parents in their study citing genetics plus an environmental factor and a further 3% genetics
plus a biological factor. These findings suggest that epigenetic explanations of causality may well increasingly find favour with parents in the future, perhaps by representing a mechanism by which scientific evidence and other less validated but personally held beliefs can be integrated.

The analysis of causal beliefs and demographics gives some limited evidence that specific beliefs may be more prevalent in certain demographic groups. White parents in this sample were found to be more likely to consider pregnancy and birth related factors as potential causes than non-white parents, while belief in genetics as a cause was found to be less prevalent in parents from higher income families. These exploratory findings are of some interest, though there is little in the current literature to help interpret and understand them. The majority of associations tested for were non-significant, suggesting that to a large extent causal beliefs are individually held and not demographically determined.

There are limitations to the study that should be borne in mind when interpreting the data. The method and timing of collection of causal belief data, i.e. face to face at first meeting, may have resulted in parents being less comfortable with openly discussing personal beliefs, in particular where internal attributions or more unusual beliefs exist. Therapists may also have added a level of interpretation into their recording of the parents’ responses to the causal belief question. Although a wide range of ethnicities were represented in the sample, the white/non-white split, which was necessitated by the numbers, does not allow for finer grained investigation into different cultural views, including of course cultural difference within the white group. Sample sizes for individual belief categories were relatively small (see table 3), and multiple testing was carried out; associations found can only be considered preliminary and would need to be tested in further confirmatory studies.

**Conclusion**

In summary, this sample of demographically diverse parents, drawn from sites across the UK, subscribed to a wide range of beliefs about the cause of autism in their child. Few of the parents interviewed held fixed views about a single cause; most cited two or more possibilities, whilst about a third either did not have any specific beliefs or preferred not to think about it. The study found some evidence of parents embracing epigenetic explanations i.e. a genetic predisposition being triggered by an environmental factor. A noteworthy minority of parents still attributed some blame to themselves for their child’s autism, despite advances in scientific understanding of the disorder. Although this study highlighted possible group level association between ethnicity and pregnancy related beliefs, and family income and genetic beliefs, causal
beliefs were in the main individually held and could not be predicted from the demographic factors investigated. Since causal beliefs have been proposed to influence a range of factors potentially relevant to the success of intervention, such as maternal stress and commitment to treatment, therapists working with parents of children with autism should consider ascertaining causal beliefs and the effect of these on the parent as an integral part of the assessment and intervention process. The presence of parents with multiple beliefs has implications for data analysis and empirical research into factors associating with causal beliefs. Researchers considering the effects of causal beliefs on other factors should take account of the propensity to multiple beliefs and uncertainty.
3.3 Findings of the thematic analysis of parent-therapist dialogue

The qualitative analysis of parent-therapist dialogue aimed to descriptively explore two issues, the topics on which parents and therapists expressed their perspectives and the manner by which parents’ perspectives were elicited, communicated and responded to. This section reports the main findings of the thematic analysis. Discussion of the findings in relation to the literature is included in the Discussion chapter, Section 4.2.2. How these findings were then used to inform the development of the PPCS is reported in Paper 2: Development of the Parental Perspectives Coding Scheme (Section 3.4).

3.3.1 Summary of codes and the thematic network

The methods used for the thematic analysis were described in detail in Section 2.3.1. An example of a section of transcript coded for individual codes and themes is displayed in figure 3. The inductive complete coding of the 6 initial transcripts was open and detailed, with codes describing the perspectives the parents and therapists gave and the responses to them. A large number and variety of codes were created e.g. ‘predictability good’; ‘optimism’; ‘strategy not normal’. These individual codes were then grouped into themes and sub-themes following a more deductive approach, with similarity of topic on which perspective was expressed being the guiding factor for grouping. An example of how one of the themes, ‘Own Feelings’, was built up from individual detailed codes is given in figure 4 to illustrate the process.

Additional transcripts were then coded to check that saturation at the level of themes had occurred i.e. that the perspectives being expressed could be encompassed by the themes already created. This was demonstrated for the next two transcripts and so coding was stopped after 8 transcripts in total. The parent themes were then grouped into 5 overarching themes: Parent Perspective on Child, Parent Perspective on Own Actions and Strategies, Parent Perspective on Self, Parent Personal Beliefs and Priorities, Parent Perspective on Therapy Progress. Five corresponding overarching themes were created for the therapist themes: Therapist Perspective on Child, Therapist/PACT manualised strategies, Therapist Perspective on Parent, Therapist/PACT Intervention Beliefs and Priorities, Therapist Perspective on Therapy Progress.
Fig 3: Excerpt of a Coded Transcript

<table>
<thead>
<tr>
<th>Parent and Therapist have just finished watching an excerpt of video in which the child is directing the parent in a game with pop up sticks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quotation</strong></td>
</tr>
<tr>
<td><strong>P</strong> he likes the idea that I know what to do</td>
</tr>
<tr>
<td><strong>T</strong> So, what?</td>
</tr>
<tr>
<td><strong>P</strong> he’s enjoying the interaction with me</td>
</tr>
<tr>
<td><strong>T</strong> mm hmm</td>
</tr>
<tr>
<td><strong>P</strong> this is not something he wants to do on his own</td>
</tr>
<tr>
<td><strong>T</strong> no</td>
</tr>
<tr>
<td><strong>P</strong> this is something he wants participation with me</td>
</tr>
<tr>
<td><strong>T</strong> so, how is he getting you involved?</td>
</tr>
<tr>
<td><strong>P</strong> like he looks at me and he keeps, it’s a sequence so I know what to do… By him going over and over again I’m supposed to know what to do (laughs)</td>
</tr>
<tr>
<td><strong>T</strong> yes (laugh) absolutely, yes he’s kind of expecting you to say it, he looks at you and he says the word doesn’t he?</td>
</tr>
<tr>
<td><strong>T</strong> so that’s how he interacts,</td>
</tr>
<tr>
<td><strong>T</strong> that’s how he knows that you’re going to do what he wants</td>
</tr>
<tr>
<td><strong>P</strong> mm hmm</td>
</tr>
<tr>
<td><strong>T</strong> you’re involved in his game</td>
</tr>
<tr>
<td><strong>P</strong> mm hmm</td>
</tr>
<tr>
<td><strong>T</strong> he knows that you know what to do and that must feel quite…</td>
</tr>
<tr>
<td><strong>P</strong> safe</td>
</tr>
<tr>
<td><strong>T</strong> yes, safe, that’s a good word for him, he’s feeling safe, he knows what’s happening near</td>
</tr>
<tr>
<td><strong>T</strong> so going with it, how does it feel for you going with it all the time?</td>
</tr>
<tr>
<td><strong>P</strong> I think, I think it’s good it’s a good thing um, because I think um, what he’s achieving is communication</td>
</tr>
<tr>
<td><strong>T</strong> yes</td>
</tr>
<tr>
<td><strong>P</strong> and the fact that he’s enjoying that, he’s beginning to enjoy interaction with people</td>
</tr>
<tr>
<td><strong>T</strong> yes</td>
</tr>
<tr>
<td><strong>P</strong> even if it’s on his own terms</td>
</tr>
<tr>
<td><strong>T</strong> yeah, absolutely.</td>
</tr>
</tbody>
</table>

Later in same session, after viewing another excerpt of play in which parent introduces a new game…

<table>
<thead>
<tr>
<th><strong>Quotation</strong></th>
<th><strong>Descriptive Codes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P</strong> I think I was getting bored with the toy and I thought let’s do something else</td>
<td><strong>Theme</strong>: Overarching theme</td>
</tr>
<tr>
<td><strong>T</strong> Mmm hmm, so you were bored and so you thought well I’ll change it</td>
<td><strong>Boredom</strong>: Own Feelings: On Self [Parent]</td>
</tr>
<tr>
<td><strong>P</strong> Yeah, yeah</td>
<td><strong>Follows up</strong> [Therapist]</td>
</tr>
<tr>
<td><strong>T</strong> what about him accepting it</td>
<td><strong>Clearly agrees</strong> [Parent]</td>
</tr>
<tr>
<td><strong>P</strong> I suppose because it was something that he enjoys and likes he tried to go along with it.</td>
<td><strong>Wanting/Accepting Interaction</strong>: Child’s Viewpoint: On Child [Parent]</td>
</tr>
<tr>
<td><strong>T</strong> Yes And do you think the fact that perhaps you went with his thing for so long meant that…</td>
<td><strong>Probes for perspective</strong> [Therapist]</td>
</tr>
<tr>
<td><strong>P</strong> maybe he decided to go with mine</td>
<td><strong>Wanting/Accepting Interaction</strong>: Child’s Viewpoint: On Child [Parent]</td>
</tr>
<tr>
<td><strong>T</strong> Yeah. Had you done that at the beginning do you think…</td>
<td><strong>Probes for Perspective</strong> [Therapist]</td>
</tr>
<tr>
<td><strong>P</strong> no</td>
<td></td>
</tr>
<tr>
<td><strong>T</strong> you might not have got so much out of the play</td>
<td></td>
</tr>
<tr>
<td><strong>P</strong> I mean we’ve made a lot of progress,</td>
<td><strong>Good progress</strong>: Progress: On Therapy Process and Progress [Parent]</td>
</tr>
<tr>
<td><strong>T</strong> mm hmm</td>
<td><strong>Rejecting interaction</strong>: Child Behaviour: On Child [Parent]</td>
</tr>
<tr>
<td><strong>P</strong> you remember right at the beginning, if he saw something he wouldn’t even let me near</td>
<td><strong>Clearly Agrees</strong> [Therapist]</td>
</tr>
<tr>
<td><strong>T</strong> no, it was his thing</td>
<td><strong>Wanting/Accepting interaction</strong>: Child’s Behaviour: On Child [Parent]</td>
</tr>
<tr>
<td><strong>P</strong> it was his thing and it would take him a while to play with it before he would let you, but this time he let me</td>
<td></td>
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</tbody>
</table>
Figure 4 ‘Own Feelings’ theme

Figure 5 summarises the main themes and overarching themes developed from the individual codes, and their relationship in a simple network diagram. Themes related to the topics on which parents and therapists expressed perspectives are shown on the left and right hand side of the diagram respectively. Individual codes related to the manner in which these perspectives were elicited, communicated and responded to are shown in the middle section of the diagram.

Each of the 5 overarching themes is described in more detail below with illustrative quotations, to more fully explain the codes and themes generated. In interpreting the dialogue it has to be borne in mind that these discussions take place within a specific social context, i.e. a therapy session, and that actual perspectives expressed may not be reflective of either the parents’ or the therapists’ true perspectives. Parents, for a range of reasons, may have chosen to withhold information on their perspectives and beliefs that they prefer not to share with the therapist. Therapists in this case were constrained to promoting the PACT philosophy, especially given that sessions were being videoed and randomly selected to rate their fidelity in delivering the intervention throughout the trial. This issue would be particularly relevant if the aim was to take the analysis further and develop models or theories based on the details of the perspectives expressed, or to describe phenomenologically the lived experiences of parents of
Figure 5. PACT Session Thematic Network

- **On Self**
  - Own feelings
  - Personality
  - Confidence/Ability

- **On Child**
  - Feelings
  - Motivation
  - Communication
  - Behaviour
  - Viewpoint

- **Beliefs and Priorities**
  - Beliefs
  - Priorities

- **On Own Actions and Strategies**
  - Own Strategies
  - Thoughts on Strategies
  - Reflection on Own Actions
  - Progress
  - Process

- **On Therapy**
  - PACT Strategies
  - On Therapy

- **PARENT’S PERSPECTIVE**
  - Experience of Strategies
  - Understanding of Strategies

- **THERAPIST’S PERSPECTIVE**
  - Ignore/Revert to Own Agenda
  - Postpone Discussion
  - Acknowledge
  - Check Understanding
  - Agree Clearly
  - Agree Partly
  - Consider
  - Question
  - Disagree
  - Refer Back
  - Follow Up
  - Probe for Perspective
  - Ask Advice
  - Give Advice

- **Parent’s Ability/Expertise**
  - Progress

- **Parent’s Feelings**
  - Personality

- **Parent’s Ability/Expertise**
  - Confidence/Ability
children with autism. The level of interest of the analysis here is more restricted i.e. to simply categorise in terms of the topics on which perspectives are expressed, rather than what those perspectives actually are. Even so the social context of the dialogue should still be borne in mind when reading the quotations. In all quotations P = parent, T= therapist and Number = the number of the transcript from which the quotation was taken.

3.3.2 Topics on which perspectives expressed

Perspective on Child

Parents: To a greater or lesser extent all the parents expressed perspectives on their child, including interpretations of their child’s communication and behaviour, their child’s feelings, their child’s personality, motivation and thoughts. These views were often based on their intimate knowledge of the child as evidenced by their reporting of usual behaviour and communication, and changes they observed in the child over the course of therapy e.g.

P1: he likes the putting it all together very orderly, doing it and finishing it and seeing it and then starting, so he likes starting something and the thing having an end.

The parent described what she thinks the child’s motivation for playing with a particular toy was, based on her knowledge that the child likes goal oriented tasks and toys e.g. puzzles.

(Parent: On Child: Motivation)

P5: that’s all he wants really, for them [cars] to go past his eyes.

This parent suggested that the child’s interest in the cars was not as a toy for playing per se; rather that he enjoyed the visual stimulation of passing them in front of his eyes (Parent: On Child: Motivation).

P2: I think that will be something that is more with [child]’s, to go with [child]’s personality, not any diagnosis or anything, more about to go with [child]’s because he’s not bothered.

The parent interpreted the child’s passivity in play as a facet of his personality rather than a part of his autism; the implication is that he would be passive even if he didn’t have the diagnosis (Parent: On Child: Personality).

Parents also tried out new interpretations based on what they had seen on the play videos. Sometimes this was spontaneous e.g.

P2: But I think because I’m paying attention to what he wants to do, so he’s copying what I’m doing, it’s like we’re relaying
Here, after viewing an excerpt on video, the parent spontaneously gave this explanation for her child’s behaviour in play i.e. why she thought the child had started copying some of her play (Parent: On Child: Behaviour)

Other times the parents were guided by the therapist’s prompts e.g.

T6: Yeah. And you say he’s beginning to, sort of, he’s coming to you more.
P6: Mm.
T6: And why do you think that is?
P6: Because he sees that mummy is, like, a friend now, a child like me now.

In this example the parent gave an explanation for the child’s change in behaviour in play in direct response to a therapist question/elicitation i.e. that he now saw her as someone more on his level, someone that he could play with (Parent: On Child: Behaviour).

T1 So it’s thinking about when does he [respond]
P1 When he has opportunities
T1 And when doesn’t he? Is it because he doesn’t know? Is it because he doesn’t want to at that point? Does he feel an expectation?
P1 I’m not sure whether it’s just um [pause] I think he responds whenever he thinks it’s just part of the play rather than you must speak.

Here the therapist guided the parent to think about and give a perspective on the child’s communication behaviour i.e. that he responds when it’s a part of the play and there is no pressure or expectation on him to speak (Parent: On Child: Communication)

Therapists: Therapists also frequently expressed perspectives on the child. In contrast with the parents, at this early stage of intervention, comments seemed to be based mainly on professionally situated knowledge of the development of communication in autism, or on brief observation of the child rather than intimate knowledge of the child.

T3: The way he learns, we’ll talk a bit more about how he’s learning language, and how he’s using language later, I mean all I will say is it sounds like he’s learnt some phrases and he’s learnt which context it’s appropriate to use them in so using a phrase like ‘it’s ok’, you know it’s great that he’s learnt to apply it to a situation where that is appropriate...it’s just the way he learns language, he’s going to be learning it a bit differently

The therapist’s interpretation of the child’s communication seems to be based on a professional understanding of a tendency to stereotypical speech and the use of learnt phrases in autism (Therapist: On Child: Communication).

T4: But the fun aspect makes it good quality shared attention, because it’s fun he wants to do it and share that with you

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This therapist gave her explanation, based on observation, of why the child was motivated to play a particular game with the parent, i.e. because the game was fun. (Therapist: On Child: Motivation)

**Perspective on Own Actions and Strategies**

*Parents:* All parents gave descriptions or explanations of their own actions, either spontaneously or in response to a therapist probe, often offering reasons why they had acted in a certain way. Some went further to reflect on the effects of their actions on interaction with their child.

T6: You were trying to take the slinky to join in?
P6: Yeah, to do it myself, what he want.
T6: You were going to…?
P6: To do myself.
T6: You were going to skip?
P6: Yeah

The parent confirmed that she had been trying to take the slinky toy from the child and gave an explanation why, i.e. she wanted to join in by copying his skipping (Parent: Actions and Strategies: Own actions).

P2: I wanted him to look at me, because he, um, he wasn’t looking at me when he was taking my hand so I was, I pulled myself back

In this example the child wanted the parent to operate a toy and was requesting this by moving her hand to the toy without making eye contact (sometimes referred to in autism as ‘using her hand as a tool’). The parent explained that she moved away because she wanted him to look at her and acknowledge her first (Parent: Actions and Strategies: Own Actions).

Parents also discussed their experiences of interaction strategies they had tried with their child, suggested strategies that they thought might work and gave insight into their understanding of specific strategies. They gave reactions to interaction strategies recommended by the therapists

P4: I know what you, I know that it is little steps and I know that…
T4: Okay.
P4: and I know that I sort of jump, run before you can walk, but I just feel like I’ve been doing that and it doesn’t work [laughter]. You know what I mean, that’s just how I…
T4: Yeah.
P4: that’s just sort of like well I do, I’ve been doing that, I did that and it didn’t work…
T4: Uh-huh.
P4: so I’m sort of like, got to do that again now.
In this example, rather than simply accepting therapist advice on a strategy, the parent told the therapist her thoughts about, and previous experience of, the strategy; she had already tried it, didn’t find it worked for them and was not keen to try the strategy again (Parent: Actions and Strategies: Experience of strategies).

Advice from other professionals, which sometimes included ideas from different approaches that conflicted with the PACT intervention, also influenced the parent’s perspective on strategies.

T2: What’s the message there then?
P2: Not to make a demand on him but... It’s a bit different to what [local therapist ] is saying
T2: yes
P2: Saying to make it hard on him

In this example, having watched a video excerpt of play, the parent recognised that the PACT therapist’s suggested strategy of reducing demands on the child to maintain the interaction may be helpful in the situation, but also told the therapist that it was in direct conflict with advice she had been given by another professional (Parent: Actions and Strategies: Thoughts on strategy).

The majority of the time parents expressed agreement or a willingness to go along with the strategies suggested by the PACT therapist, though often in the form of a simple one word response such as ‘yeah’ or ‘OK’. In these cases it could be difficult to tell whether parents were truly in agreement with the strategy or not; non-verbal communication, from videos synchronised with the transcripts, had to be considered to aid coding decisions.

Only one parent in this sample openly voiced her disagreement with the therapist about strategies.

T4: do you think there’s any way you could join in by almost, I don’t know, it’s trying to think is there a way you can use some of that ‘oooh’ in other activities?
P4: I don’t know. It’s like building a block up, oooh...
T4: Uh-huh.
P4: or a car, it’s like trying to get that excitement, isn’t it, it’s not the same.
T4: Mmm.
P4: It’s like, oooh, here’s a car, it just doesn’t have the same, it’s fake.

In this example the therapist had suggested the parent try expressing more excitement in a range of games and activities to engage the child, as she had successfully done in a rough and tumble game. The parent told the therapist that she thought this would be unnatural (Parent: Actions and Strategies: Thoughts on strategy).
Other parents appeared to question the strategies proposed more indirectly, expressing an element of doubt rather than directly disagreeing

\[ P1: \text{That's what I was looking to but maybe it's too fast, I don't know} \]

The parent here expressed some doubt over whether it was the right time to introduce a new strategy suggested by the therapist (Parent: Actions and Strategies: Thoughts on strategy).

\[ T6: \text{I mean, I…what do you think about copying his sounds still? How do you…?} \]
\[ P6: \text{I had to…it's alright, of course…} \]
\[ T6: \text{Try it and see.} \]
\[ P6: \text{Yeah, try and see.} \]

In this example the parent’s tone of voice and body language on the video suggested that the parent was not convinced about the strategy of copying the child’s sounds, however this was not directly expressed, instead she outwardly agreed with therapist. The therapist picked up on this by suggesting she just tried the strategy to see what happens. Again the parent agreed but with an unenthusiastic tone of voice. Parent: Actions and Strategies: Thoughts on strategy)

**Therapists:** As the therapy sessions took place in the context of a research trial therapists were constrained to recommending the set of strategies associated with the manualised PACT intervention and therapist fidelity to the intervention was checked by video recordings throughout the trial. PACT strategies are based on prior research findings and evidence of successful application with other children with autism, however it is possible that at times the strategies did not correspond to what the therapist may have recommended if using her own professional judgement.

\[ T5: \text{We often try to encourage parents to do sort of like lots of copying of their child and often it sort of shows the child that you're, you're noticing what they're doing} \]
\[ P5: \text{yeah} \]
\[ T5: \text{and placing importance on it} \]

In this example the therapist explained the rationale behind the PACT strategy of copying the child; that it is a strategy that is frequently used and often has a positive effect on the child (Therapist: PACT strategy).

Although they were not free to divert from the manual and encourage parents to try out their own strategies that were either in conflict with PACT, or that the parent wanted to introduce sooner than in the manual, therapists generally tried to suggest strategies and individualise advice to the child/parent in the session.
T2: Do you think, in a way, let me think now, this very early bit, cos we're still in this really early bit cos like I said it's really important that we get it right, it's the springboard for everything else, in this early stage it is quite important to respond quite quickly

P2: mm, hmm

T2: and in a way it's a little bit different to what [local therapist's] been saying to you, to hold back, we do come to that but I want to get these foundations really established first, we do come on to that but not for a bit.

Here the therapist responded to the parent’s questioning of conflicting strategies given by her and the child’s usual therapist. The therapist gave the PACT perspective that it is too soon to introduce the later stage strategy of holding back, and that it is important at this stage to use the alternative strategy of responding quickly (Therapist: PACT strategy).

**Perspective on Self**

Parents: Parents disclosed information relating to themselves personally, including their feelings and emotions, their own personality, confidence and sense of ability to help their child.

Feelings and emotions: Personal feelings and emotions were disclosed relating to a range of issues. A number of parents described feelings of overwhelming personal responsibility for the development of their child, and the stress associated with this. Parents’ comments captured the sense of strain involved in mediating the development of a child with autism, using phrases such as ‘it’s difficult’, ‘it’s hard work’.

P8: But, um, it’s you’re kind of talking to yourself all day long, so it’s like, you know what I mean?

T8: Yeah

P8: So it is, it’s really hard

This parent was talking about how she tried to use lots of language with her child but that it was difficult to keep going as he seemed not to respond (Parent: On Self: Feelings).

Parents also discussed coping with feelings of frustration, boredom and lethargy at the seeming repetitiveness and lack of reward in their role. A common feeling disclosed was one of being rejected or not needed by their child, the idea that despite all their efforts the child often seemed not interested in them, didn’t want to be with them or only wanted them for what they could do for them, as illustrated in the quotation below.

P3: Just do it again, that’s all I get [from child]

Here the parent was describing an interaction with her child, she seemed to be expressing that the child’s only interest in her was in what he wanted her to do with the toy for him.
weariness of tone seemed to be an implication that this was not unique to this game, but was something she experiences often. (Parent: On Self: Feelings)

In contrast strong feelings of happiness and pleasure were often expressed when interaction with the child in play had gone well. Parents talked about feeling happy, optimistic, encouraged and energised, and described pleasure and enjoyment in the interaction.

T1: So how does that feel, how does that feel watching it back?
P1: (wiping tears) I’m so happy

This quotation follows the parent watching an excerpt of her and her child successfully playing together on the video. The parent is moved to tears in expressing her happiness (Parent: On Self: Feelings).

T2: It’s so nice that he’s really appreciating that play time. Are you enjoying it as well?
P2: yeh, yeh, yeh definitely yeh.

Here the therapist asks the parent whether she enjoys the play and the parent is emphatic in responding that she does. (Parent: On Self: Feelings)

Parent Personality and Confidence: A few parents in the sample specifically discussed their own personality and confidence.

P2: I’m not a type of person to er just, I don’t like er sitting around, just I like doin things

This parent brought up a discussion of her own personality in the context of how it impacts on play with her child (Parent: On Self: Personality).

P2 I’m not afraid of playing with the toys any more … I’m not afraid to play with him

Here the same parent discloses that she has overcome previous inhibitions in playing with her child (Parent: On Self: Confidence/ Ability)

Therapists: Therapists also discussed their perspective on the parent, giving opinions on parent actions and on their belief in the parent’s abilities,

T2: You’re enjoying it…
P2: Hmm mmm
T2: Because he’s enjoying it.

In this example the therapist gives her perspective on why the parent was enjoying the play i.e. because the child was also enjoying it (Therapist: On Parent: Feelings)

T4: I think you’re saying all the times where it could be anybody, but I don’t think it could, cause you’re the one that can read him much better
whilst here the therapist gives her view of the parent as an expert on reading her own child
(Therapist: On Parent: Expertise/Ability)

**Beliefs and Priorities**

**Parents:** Parents varied in the extent to which they brought up their underlying beliefs about issues such as the development of communication, learning and parenting. Beliefs discussed included prioritising teaching and formal learning over play for pleasure, play being something for children only and a feeling that they as parents were responsible for their child’s learning.

- **T4:** I think it’s something that parents often feel that oh what, what’s he, what’s a child learning from doing this...
- **P4:** Hmm mmm
- **T4:** and you kind of want to, want to make sure that they’re...
- **P4:** They’re doing something or you’re doing something constructive type of thing with him rather than just chasing him around and playing all day

The parent, encouraged by the therapist, disclosed a need to feel she was doing some learning activities with the child rather than just playing (Parent: Beliefs and Priorities: Priorities)

- **P6:** Mummy just behave like a baby now [Laughs]
- **T6:** Say that again, sorry…
- **P6:** I said, I just behaving sometimes, behaving like a baby [laughing] just now, like a baby, you know.
- **T6:** Oh, you’re behaving like a baby?
- **P6:** Yeah, I mean, I was just playing and… [laughing].

The parent’s spontaneous comment suggested that she felt playing is something only children usually do, and that she was feeling childish when she was playing (Parent: Beliefs and Priorities: Beliefs)

**Therapists:** As with strategies therapists were constrained by the protocol of the research intervention to expressing a specified set of priorities and beliefs about how communication develops in children with autism.

- **T4:** I think lots of research has been done into this and I think generally it’s found that children with autism do give signals but they’re very unusual signals, they’re very weak signals and kind of we might not necessarily pick up on all of them and actually once we really tune into them and start to pick up on them and respond to them

The therapist explained the PACT perspective on children with autism’s communication.
(Therapist: PACT beliefs and priorities)
Perspective on Process and Progress of Therapy

Parents: A number of parents expressed views about both the process and the progress of therapy. Some were positive, commenting on the progress made so far.

P8: And, um, he’s comfortable and he’s coming out with a lot. I mean when we first started I was lucky to get a word out of him
T8: Yeah
P8: Yeah, and we got loads out of him there

In this example the parent and therapist had been discussing how much language the child was using in play – the parent spontaneously expressed how much this had changed since they started therapy (Parent: On Therapy: Progress)

P7: But at first, when I started doing it, I was like, ooh, I struggled a bit with it, but now it’s
T7: Yeah.
P7: Yeah, it’s er... easier

The parent acknowledged that she found the process of intervention hard at first but was now finding it easier (Parent: On Therapy: Process).

P2: It was very encouraging because it obviously means that me working with [child] is giving some results

This parent expressed a view that the PACT process of her working with her child seemed to be having an effect (Parent: On Therapy: Progress).

Others were more negative expressing frustration at the process of therapy or concern about rate of progress.

P4: It’s just cause you’re analysing things and you’re asking me questions and it’s ‘oobb’
T4: I know, it’s hard work cause you’re having to really think
P4: You’re asking these questions and I don’t remember [laughter].
T4: Sorry. It is hard work.

The parent seems to have expressed some frustration at the PACT process, where parents are guided to work things out for themselves from video and discussion rather than being given direct advice (Parent: On Therapy: Process).

P1: I was thinking you know, are we making any progress?

This parent questioned whether they were making any progress with the intervention (Parent: On Therapy: Progress).

Therapists: Therapists also commented on progress of therapy, generally emphasising the positive.
T1: you were saying that you maybe thought that you weren’t making (progress), but actually to look back and think
P1: that’s amazing
T1: an amazing achievement, yes absolutely

The therapist used a positive excerpt of video to evidence her perspective that progress had been made when you looked back at where they started from (Therapist: Therapy: Progress)

3.3.3 Manner in which perspectives expressed

Eliciting perspectives

Therapists and parents both actively sought each other’s perspective, though this was much more prevalent for therapists, with ‘Therapist probes for perspective’ being the most frequently applied code in the analysis.

E.g. Therapist probes for perspective

T1: what you think he’d do now if you...
P1: if I insisted, on changing it?
T1: yeah yeah
P1: he would switch off I think

Here the therapist and parent had been discussing how engaged the child was on the video when the parent kept going with his game. The therapist probed to find out what the parent thought would happen if she changed the game instead (Therapist Probes for Perspective).

Parent probes for therapist perspective were mainly coded as asking for advice.

E.g. Parent asks advice

P7: I said…
T7: Oh…
P7: press and push…
T7: Uh-huh.
P7: and actually I should have stuck to one shouldn’t I really?

The parent reflected that she had used different words for the same action with the child on the video and asked advice from the therapist as to whether it would be better to keep to the same word (Parent Asks Advice).

Parent response to therapist expressed perspective

As well as giving their perspective spontaneously or in response to therapist probes, parents reacted in a variety of ways to perspectives expressed by the therapist, including for example to therapists’ comments on the child’s communication. These reactions give further potential
insights into the parents’ perspectives. Parents demonstrated a range of reactions to the therapist’s perspective. They might openly agree, consider (i.e. discuss in a manner that suggests possible agreement), question (i.e. discuss in a manner that suggests possible disagreement) or openly disagree. Non-verbal behaviours and intonation from the videos were helpful in categorising parent reactions.

E.g. clearly agrees

T2: that was sort of making a demand on him
P2: Yeah, true
T2: Do you see what I mean
P2: mmm

Here, alongside the words, the parent’s intonation and gestures on the video suggested a clear level of agreement; the parent gave definite nods and made eye contact with the therapist

E.g. openly disagrees

T3: it’s just the way he learns language, he’s going to be learning it a bit differently
P3: I feel he has the language
T3: It’s hard to know what...
P3: He has it, cos this one week I know he has it

Here the therapist had given her perspective on the language the child had and how he was learning it; the parent interrupted the therapist and definitely gave her view that her child already had the language he needed in this particular situation, her tone of voice was emphatic.

**Therapist response to parent expressed perspective**

Therapists responded to parents’ expressed perspectives in a variety of ways resulting in 11 individual codes: ignore/revert to own agenda, postpone discussion, acknowledge briefly, openly disagree, question implying disagreement, check understanding, consider, agree partly, clearly agree, follow up, refer back to previously expressed perspective.

E.g. agree

P3: I think whatever I have to remain calm, I have to remain calm.
T3: Yeah.
P3: I have to remain calm and let him be.
T3: Yeah.
P3: Because he comes back to me...

The parent suggested that when her child was getting over-excited or upset and withdrawing from interaction she should wait calmly for him to re-engage (Parent: Actions and Strategies: Own Strategy). The therapist signalled agreement with her suggestion through words (yeah) and non-verbal agreement (clear nods and smiles).
E.g. question

P6: He don’t like me to copy him, he noticed I’m copying.

T6: He certainly noticed, I don’t know if he doesn’t like it, I don’t know, is that your feeling?

The parent expressed her view that the child noticed her copying him and didn’t like it (Parent: On Child: Feelings). The therapist agreed that he noticed, but questioned whether he didn’t like it. She didn’t openly disagree with the parent, and chose words to suggest that she was not sure, but her tone of voice gave an impression that she did not actually agree.

The first three codes, ignore/revert to own agenda, postpone discussion, acknowledge briefly, reflected situations where the therapist took little account of the parent’s perspective and continued the session without further reference to, or integration of, the parent’s perspective. The final two, follow up and refer back to previously expressed perspective reflected situations where the therapist took full account of an expressed parental perspective, either immediately or later in the session. For the other codes it was noted that the extent to which the parent’s perspective could be considered to be taken account of varied. Using the example of the openly disagree code, if the therapist and parent discussed their disagreement and either came to a negotiated agreement or agreed to differ then the parent’s perspective could be considered to have been fully taken into account; on the other hand if the therapist’s opposing opinion was presented as final then the parent’s perspective had effectively been ignored. Although the parent-therapist dialogue was not specifically coded for this dimension (i.e. extent to which perspective was taken account of) in the analysis, memos about it were made during coding. These memos were also used, alongside the codes and code families, to inform the development of the Parent Perspectives Coding Scheme and this dimension became an important part of the final scheme (see Paper 2).

3.3.4 Thematic analysis as a starting point for a quantitative coding scheme

This section of the thesis has reported on the findings of the thematic analysis of PACT session data, up to and including the creation of the network diagram. The aim of the thematic analysis was to provide information on the topics on which parents expressed their perspective in sessions, and the manner in which these were responded to by the therapist. By the nature of the qualitative methodology used, the product was an in-depth and rich description of the interaction between the therapist and the parents in terms of the discussion and negotiation of parents’ perspectives.
The thematic analysis was undertaken to provide a starting point for the development of a quantitative coding scheme to measure the expression of parental perspectives and therapist responses to them. Any coding scheme developed from the analysis however would need to reduce this rich description to a small, defined set of items that could be efficiently and reliably coded across a larger dataset and subsequently used as variables in quantitative analyses. The creation, as an integral part of the analysis, of the qualitative themes illustrated in the network diagram began the process of data reduction, by providing a means by which the many individual codes identified might be merged and grouped. However the properties of a theme in a qualitative analysis and those of an item in a quantitative coding scheme are subtly different. Whilst a theme represents a way of grouping similar codes to capture some common thread that has been identified as present in the data, to be of utility in subsequent correlational analyses items in a coding scheme need not just be present in the data, but must also be capable of differentiating between sessions. Items that score the same for all sessions or are rarely scored at all are of minimal use.

This section has concluded with the product of the thematic analysis, i.e. the network diagram; the way in which the themes in this diagram were subsequently reduced to form the items of the PPCS coding scheme is described more fully in paper 2.
3.4 Paper 2

Development of the Parental Perspectives Coding Scheme (PPCS)

Abstract

Background: The extent to which parents express their own beliefs and perspectives in parent-mediated intervention, and the therapist’s response to these, may effect parents’ engagement with treatment. The PPCS was developed to measure the quality of dialogue around parental perspectives within an intervention session. Methods: Parent-therapist dialogue in a sample of 8 intervention sessions was coded using thematic analysis. Network diagrams showing themes on which perspectives were expressed, and responses to them, were drawn up. These themes informed the development of items for the PPCS. An iterative process of piloting and refinements led to the final version of the scheme. A coding manual was written, using examples based on quotations from the qualitative analysis to illustrate the items. Formal piloting was undertaken, with two coders independently rating 6 sessions. Results: Thematic analysis created 5 overarching themes, which were merged into three items for the PPCS; Interpretation of the Child (IOC), Parent Actions and Strategies (PAS) and Parental Self Disclosures (PSD). Raters score each item for Expression i.e. the detail in which the parent expresses her perspective and Integration i.e. the extent to which the therapist integrates the parent’s expressed perspective into the session. Scores are weighted by an evaluation of session time spent on dialogue on that item. Reliabilities for individual weighted items were satisfactory to good (ICCs .72 - .96). Distribution of scores indicated that the scheme was capable of differentiating sessions. Conclusions: The PPCS is a relatively simple and efficient instrument for on-line video coding the quality of parent-therapist dialogue around parental perspectives in an intervention session. The development of the instrument, ground up from qualitative analysis of session data, gives items ecological validity and the pilot phase has demonstrated that it is possible to code reliably using it. The PPCS has potential as both a research tool and an aid to reflection for clinicians.

Introduction

Interest in the manner in which health care providers and their clients interact, in particular in terms of patient centred dialogue and the influence of this on a range of outcomes, has been increasingly researched in recent years (Epstein, Franks et al. 2005, Street 2013). More recently there have been calls for research into the mechanisms by which such interaction may mediate
outcomes (Street 2013). The suggestion is that specific types of interaction may influence proximal outcomes such as treatment adherence or patient self-efficacy, which in turn mediate the health outcomes of the client.

One possible candidate for such a proximal outcome would be the therapeutic alliance. Therapeutic alliance is a concept that is well developed in the field of psychiatry and that is receiving increased attention in other health care provider-client contexts. It concerns itself with the quality of the working relationship between the provider and the client, encompassing both aspects of the personal relationship, referred to as the bond, and the degree of collaboration on the goals and tasks of therapy (Bordin 1979). Interest in therapeutic alliance has remained high in psychiatry as a result of a small but significant and consistent positive relationship with outcome in a variety of therapies and client groups (Martin, Garske et al. 2000, Shirk and Karver 2003, Horvath, Del Re et al. 2011, Shirk, Karver et al. 2011). The alliance is a complex construct and research has shown a number of baseline client and therapist factors, including for example personality (Ackerman and Hilsenroth 2003, Coleman 2006, Smith, Hilsenroth et al. 2014), and attachment status (Bernecker, Levy et al. 2014), associate with it. Factors to do with the manner in which the provider and client interact and communicate in session have also been shown to play a part e.g. Wissow, Brown et al. (2010).

The Parental Perspectives Coding Scheme (PPCS) was developed as an integral part of research investigating factors associating with the quality of parent-therapist alliance in a parent mediated intervention for children with autism. Literature reports of qualitative interviews with parents suggest that the extent to which parents are able to express their own perspectives, and the quality of therapist’s response to these perspectives, influences how engaged they feel within the therapy process (Glogowska and Campbell 2000, Marshall, Goldbart et al. 2007). This aspect of parent-therapist interaction therefore might be a factor influencing the quality of parent-therapist alliance. Different issues on which parent’s express their perspective might theoretically be associated with different aspects of the alliance, for example if parents openly express their views on the intervention strategies this may be important to the task element of alliance whilst disclosures relating to the demands of parenting a child with autism may relate to the bond component.

The research required a scheme that could efficiently code dialogue across 120 long intervention sessions (between 35 and 120 minutes each); coding needed to be done online whilst watching the video to allow non-verbal communication to be taken into account.
Published schemes for coding health provider-client interaction available at the start of the research were reviewed e.g. the Roter Interaction System (Roter and Larson 2002), Patient Caregiver Scales (Cox, Smith et al. 2008), 4HCS (Krupat, Frankel et al. 2006). However the schemes examined had been developed to code medical consultations, as opposed to active intervention sessions, and tended to focus on a wide range of interaction variables rather than examining in detail the expression of parent perspectives and therapist’s responses to them, as was required here. In consequence a new scheme was developed specific to the purpose; the aim in developing the PPCS was to code the expression of parental perspective on a range of themes, along with the therapist’s responses, as interaction variables to be used in empirical analysis of factors influencing alliance.

In the interaction literature there are a number of examples of methods of devising coding schemes. Some are theoretically driven e.g. Ribeiro, Ribeiro et al. (2013); others by expert consensus e.g. Barnett, Niec et al. (2014), Zhou, Cameron et al. (2012). In this case, as there was little written in the literature about how and on what topics parents express their perspectives in intervention, and how perspectives on different themes are responded to by the therapist, the decision was made to derive the coding system inductively from session data. Qualitative methodology was therefore used to define categories on which the items for the coding system could be based.

This paper describes how a relatively simple and efficient coding scheme was developed from qualitative analysis of real interaction data, summarises the final scheme, and reports initial reliability data.

Methods

Setting: The data for the study was drawn from the Pre-School Autism Communication Trial. This was a multi-centre randomised control trial of a parent-mediated intervention for children with autism (Green, Charman et al. 2010). The intervention was video aided; therapist and parent recorded, viewed and discussed videos of parent-child play, with the aim of optimising parent interaction with the child and subsequent child communication. The developmentally staged strategies of the PACT intervention encourage parents to interact with their child in specific ways designed to maximise the child’s opportunities to develop social communication and language skills. During feedback discussions the therapist and parent observe the effects of the parent’s actions on the child's communication and the therapist guides the parent towards the use of PACT interaction strategies. All the feedback sessions
were themselves videoed, forming a pool of parent-therapist interaction videos from which a sample could be drawn for the qualitative analysis. The PACT study was approved by the Central Manchester Multi-Centre Research Ethics Committee. Participants gave written informed consent, including for the use of video in research. A second level of consent was given to cover public viewing of videos.

**Step 1: Qualitative analysis of session data**

**Sample:** A purposive maximum variation sample was chosen from the pool of videoed PACT sessions. 8 sessions were chosen to be representative of the range of therapists and parents in the PACT trial; parents of differing ethnicities, levels of education and with children with different severities of autism were selected, including at least one session from each of 5 therapists. Sessions chosen varied between 35 and 85 minutes in length.

**Analysis:** Thematic analysis (Braun and Clarke 2006) was used to code and create themes; the software tool Atlas.ti v6 (2011) was employed to help manage the process. In the hierarchy of qualitative studies suggested by Daly, Willis et al. (2007) the analysis intentionally formed a level 3 descriptive qualitative study, i.e. qualitative methodology was used primarily as a tool for describing categories, from which a quantitative coding scheme grounded in the data could be developed. A pragmatic stance to the qualitative analysis was taken ‘to gain knowledge in the pursuit of desired ends’ (Morgan 2007), i.e. to inform the development of an instrument to measure aspects of parent-therapist dialogue potentially relevant to the quality of therapeutic alliance in intervention.

Sessions were transcribed verbatim and synchronised with source videos so that non-verbal communication could also be used to inform coding decisions. During complete coding any section of dialogue that contained an expression of parental perspective was examined; this expression may have been explicit or implied (e.g. by a sceptical look) and may have been spontaneously given, directly elicited by the therapist, or given as a reaction to something the therapist said (indirectly elicited). An inductive approach to coding was taken, to include as much detail as possible i.e. what their perspective related to, what their perspective was, how the therapist responded to the expressed perspective. Some initial ideas about how dialogue might be reliably coded – e.g. by frequency of occurrence, or evaluation of importance – were formed during this immersion in the data and memos made.
In keeping with aim of the analysis to produce themes that could be translated into variables potentially related to the quality of alliance, codes were then grouped following a more theoretical deductive approach. The focus was on describing and classifying the range of topics on which parents and therapists expressed their perspectives (e.g. the child’s motivation, the parent’s own feelings) which might theoretically be related to different components e.g. bond, task and goal, of the alliance. Individual codes describing how parents and therapists responded to each other’s perspectives were retained. Emerging codes and categories were discussed with two colleagues (JM and PC), revisions made iteratively as needed and a network diagram of relationships between themes drawn up. The network diagram was presented for discussion to a number of individuals and groups, including a PACT trial speech and language therapist, a PACT trial parent, and seminar groups of mixed professionals working with parents. Responses confirmed the credibility and plausibility of the analyses.

Quantitative statistics for each of the main themes were obtained from the Atlas software including the overall number of quotations assigned to the theme and the number of sessions in which the theme was observed. This information about the frequency and distribution across cases was extracted to investigate whether dialogue related to each theme could be considered sufficiently present in the data to be a reliable item in a coding scheme and whether a coding scheme based on these themes might highlight differences between cases.

**Step 2: Development of the Draft PPCS**

In step 2 the findings of the qualitative analysis of session data undertaken in step 1, including the memos made and descriptive statistics for the themes, were examined to draft an initial version of the PPCS. These findings and memos contributed to decisions on the format of the scheme, the unit of coding, the items to be included in the scheme, the scale to be used and the final operation of the scheme. A coding form and an initial draft of the coding manual were developed drawing on examples from the qualitative analysis to illustrate the coding scheme categories and help with coding decisions.

**Step 3: Pilot of the Draft PPCS**

In step 3 the draft scheme was fully piloted on a further 9 sessions, randomly chosen from the pool of PACT sessions available, with each session being rated by two coders (the author and a colleague trained by the author). After the first 3 sessions any difficulties in coding and
Coding disagreements were discussed – with particular focus on items where there were disagreements of more than one rating point. Revisions to the item and rating definitions in the manual were made as necessary.

The remaining 6 sessions were then coded independently, with no further discussion between raters. Mixed effect (single measure) Intra Class Correlations (ICCs), as recommended by (Fletcher, Mazzi et al. 2011) for reporting interaction coding scheme reliability, were calculated for each item using data from all 9 sessions.

Results

**Step 1 Findings of the qualitative analysis**

Table 5 Qualitative analysis sample description

<table>
<thead>
<tr>
<th>Therapist</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Income</th>
<th>&lt;40K p/a</th>
<th>&gt;40K p/a</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent Highest Qualification</th>
<th>No Post 16 Qualifications</th>
<th>Post 16 Qualifications</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>White</th>
<th>Non-white</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child Severity</th>
<th>Moderate</th>
<th>Severe</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 details the demographic statistics for the maximum variation qualitative analysis sample; all therapists were female and all parents were mothers. Detailed findings of the qualitative analysis, including illustrative quotations and the full network diagram developed, are reported in the supplementary material (Section 3.3). The portion of the network diagram containing themes related to expressed parental perspective is illustrated in figure 6.

**Topics:** The topics on which parents expressed their perspective are grouped into 5 overarching themes:

- **Personal Beliefs and Priorities:** including parents’ beliefs about autism, communication development and child learning.
- **Perspective on Child:** including parents’ interpretations of their child’s communication/behaviour, their child’s feelings and their child’s viewpoint/motivation, both in the session and generally.
- **Perspective on Self**: personal disclosures relating to the parent self, including their feelings and emotions about a range of issues relevant to therapy and/or parenting a child with autism, their own personality, confidence and sense of self efficacy.
- **Perspective on Strategies**: parents’ perspectives on their own actions in interaction with their child, and on the PACT interaction strategies under discussion: including their experiences of strategies tried with their child, their suggestions of strategies that they thought might work, their explanation of their own actions in the interaction, their understanding of specific PACT strategies and their reactions to strategies recommended by the therapists.
- **Perspective on Therapy**: parents’ perspectives on the overall progress and process of therapy.

Figure 6  Parent perspective categories and relationship to PPCS themes.
Table 6 and Figure 7 summarise the descriptive statistics in terms of the overall number of quotations attached to a theme, the number of sessions it was observed in and the range in number of quotations per session. They illustrate variation in the extent to which the different categories of perspective were discussed in individual sessions.

Table 6  Categories for parent perspective: Statistics

<table>
<thead>
<tr>
<th>Overarching Theme</th>
<th>Theme</th>
<th>Total No. of quotations</th>
<th>In No. of sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent's Perspective on Child</td>
<td>Child's Feelings</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Child's Communication</td>
<td>67</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Child's Behaviour</td>
<td>33</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Child's Viewpoint</td>
<td>72</td>
<td>8</td>
</tr>
<tr>
<td>Parent's Perspective on Strategies</td>
<td>Own Actions</td>
<td>90</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Thoughts on strategy</td>
<td>62</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Suggests Strategy</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Understanding of Strategy</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Experience of Strategy</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Parent's Perspective on Self</td>
<td>Personality/ confidence</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Own Feelings</td>
<td>55</td>
<td>7</td>
</tr>
<tr>
<td>Parent's Beliefs and Priorities</td>
<td>Beliefs</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Priorities</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Parent's Perspective on Therapy</td>
<td>Progress</td>
<td>21</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Process</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Figure 7  Session profiles: Variation between sessions

![Session profiles: Variation between sessions](image)
**Step 2: Development of the draft PPCS**

*Items for the coding scheme:* Items for the coding scheme were derived from the 5 overarching themes created in the qualitative analysis. To be considered as items for the coding scheme themes needed to have occurred with sufficient frequency within the qualitative sample session data to be reliably defined and coded, and there also needed to be evidence of variation in the theme across sessions. This was necessary to ensure sessions might be differentiated by the items; items for which all sessions scored similarly, or a lot of sessions did not score at all, would be unlikely to be of use as variables in correlational analyses.

Examination of the descriptive statistics indicated that there was clear variation in the extent to which the different themes were discussed in individual sessions. ‘Perspective on the Child’, ‘Perspective on Self’ and ‘Perspective on Strategies’ were the most commonly discussed and featured in all sessions to varying degrees. All three were therefore potentially useful as items for the coding scheme and had clear potential links with either the goal, task or bond components of alliance. However ‘Personal Beliefs and Priorities’ and ‘Perspective on Therapy’, though also potentially linked with alliance components, were only discussed infrequently overall and not in all sessions, raising some doubt as to whether they could be reliably and usefully coded as individual items. These themes needed to either be excluded from the coding scheme or merged with another theme. On reflection and examination of quotations it was observed that these two themes shared properties with ‘Perspective on Self’, since they related to disclosures about issues internal to the parent herself (her personal beliefs and her personal feelings about the overall progress and process of therapy). Dialogue coded under these categories involved the parent revealing to the therapist something personal about herself and her feelings over and above the child-focused work of the immediate intervention session. Therefore both these themes were merged with Perspective on Self, to form a single category ‘Parent Self Disclosures’ (PSD) to be defined as an item for the coding scheme.

‘Perspective on Child’ was renamed Interpretation of Child (IOC), ‘Perspective on Strategies’ was renamed Parent Actions and Strategies (PAS) and both were defined as items for the coding scheme.

This process therefore resulted in 3 main items for the coding scheme; Interpretation of Child (IOC), Parent Actions and Strategies (PAS), Parent Self Disclosures (PSD). The shading on the network diagram in figure 6 above illustrates how the overarching themes developed in the qualitative analysis relate to the 3 main PPCS items, thus defining the item under which they are coded.
Coding Parental Expression of Perspectives: During the coding process memos were made to the effect that parents gave their perspective on the items in a range of different circumstances, sometimes spontaneously, but more often as either a response to a direct therapist probe or a reaction to something the therapist had said. It was also noted that the amount of detail in which a parent expressed their perspective on each of the topics/items varied. On some occasions parents gave very full and rich descriptions of their perspectives, discussing what they thought and why they thought it. At other times the parent gave just a hint, which the therapist then either followed up or left. Expression of parental perspectives therefore varied on two dimensions, the frequency with which they were expressed and the quality, in terms of detail, with which they were expressed.

An important early decision was whether the scheme should code Expression using an objective frequency/duration count or a subjective evaluation of quality. This decision was informed by the experience of coding for the qualitative analysis. The process of coding transcripts demonstrated that, even with the benefit of the written transcription to refer to and no time constraints, it was difficult to accurately define the boundaries of relevant episodes of dialogue; the nature of dialogue at this level of interest is that topics overlap, are expanded on, digress and return. It was recognised that reliably quantifying these episodes online during a single viewing of the video would be a real challenge. More importantly a simple frequency or duration count would also fail to capture information about the quality or detail of the expression of parental perspective. An objective scheme was therefore rejected for both practical and theoretical reasons and the decision made to base the coding of Expression on the quality dimension of detail, but to include within the coding a separate evaluation of the amount of time devoted to dialogue on each item. This would allow a ‘weighted’ score to be calculated which would give an indication of the combined quality and quantity of the scheme items. In this way, for example, a session in which the parent frequently expresses her interpretation of her child in detail will score more highly on the Exp-IOC variable than a parent who also expresses her perspective in detail but only once or twice in the session. Details on the coding of Time and calculation of weighted scores are discussed further below.

Expression was therefore more fully defined as ‘the quality of parent’s expression of perspective (either spontaneous, directly elicited or in response to a therapist expressed perspective/advice).’ Thus the rater codes each of the three items (IOC, PAS and PSD) for Expression by making an evaluative judgement on the amount of detail with which the parent expressed their perspective on that item. The operationalization of this is discussed below.
**Coding Therapist Integration of Parental Perspectives:** Figure 8 illustrates the codes from the thematic analysis related to the therapists’ responses to expressed parental perspectives.

Figure 8 Categories of therapist responses to parent perspectives.

The codes *ignore/revert to own agenda, postpone discussion, acknowledge briefly*, reflected situations where the therapist took little account of the parent's perspective and continued the session without further reference to, or integration of, the parent’s perspective. The codes *follow up* and *refer back to previously expressed perspective* reflected situations where the therapist took fuller account of an expressed parental perspective, either immediately or later in the session. For the other codes it was noted that the extent to which the parent’s perspective could be considered to be taken into account varied; using the example of the *openly disagree* code, if the therapist and parent discussed their disagreement and either came to a negotiated agreement or agreed to differ then the parent’s perspective could be considered to have been fully taken into account; on the other hand if the therapist’s opposing opinion was presented as ‘expert’ or final then the parent’s perspective had effectively been ignored. In keeping with the decision to code Expression on the basis of quality, it was decided to code therapist response for each item on this quality dimension of integration but again to weight the scores by the evaluation of the time spent on dialogue on that item. Integration was defined more fully as ‘the subsequent degree of integration of an expressed parental perspective into the session by the therapist’. The rater codes Integration for each of the three items (IOC, PAS, PSD) by making an evaluative judgement on how well the therapist followed up and integrated the parent’s expressed perspectives on that item into the session. The operationalization of this is discussed below.
Coding Time: Time was defined as ‘the amount of time in the session the parent spent on dialogue on an item’. The rater codes Time for each of the three items (IOC, PAS, PSD) by making an evaluation of how much time overall was spent on discussing the item.

Operationalisation of the PPCS

Unit of coding: Based on the quotations coded during the analysis the unit of coding for the scheme was defined to be any episode within the parent–therapist dialogue in which either a parental perspective was expressed, or an expressed parental perspective was acknowledged and/or integrated into the session by the therapist. An episode may consist of a single utterance or a couple of conversational turns. For integration it may occur immediately after the expressed parental perspective or at a later point in the session where an expressed perspective is referred back to.

Rating scales: The rating scales used were influenced by other published evaluative coding schemes, including the Four Habits Coding Scheme (Krupat, Frankel et al. 2006) and the Coding of Attachment Related Parenting (Matias et al. 2006). These schemes use ordinal scales with each point on the rating scale descriptively defined; definitions recognise that behaviours may vary across the session, using words such as mostly or rarely to capture the overall characterisation of the behaviour in the session. Figure 9 shows the coding form developed for the scheme; it is filled in to illustrate the operationalization of the scheme as described below. The number of points in the rating scale for each theme (Expression, Integration, Time) was influenced by two main considerations:

- The number of points felt necessary to adequately differentiate between sessions in each domain.
- The need for ‘sensible, meaningful’ definitions, i.e. definitions which could be reliably differentiated between by an observer whilst on-line coding.

In the Expression domain it was noted that, since the PACT therapists were trained to elicit parent perspectives, scores for Expression tended towards the positive end of the scale so the scoring system needed to be sensitive enough to differentiate between sessions. Inspection of quotations from the qualitative analysis, combined with early piloting, showed that for each theme it was possible to evaluate individual episodes of parental expression in terms of 4 descriptors: ‘no detail’; limited detail; reasonable detail; detailed. Each descriptor was fully defined in the manual and illustrated with examples based on quotations from the qualitative
analysis. Since the detail with which the parent’s perspective was expressed for each theme varied across episodes within session, and sessions were too long to expect a coder to be able to retain a memory of episodes across the session, the coding record sheet was drawn up to allow observers to make tallies/notes against each descriptor for individual episodes whilst watching the video (figure 9). These tallies/notes are not counted (as might be the case in an objective scheme) but are simply used to assist in the final subjective evaluation of the overall session on a 7 point scale: (1) Mostly no detail; (2) no detail-limited detail; (3) mostly limited detail; (4) limited detail-reasonable detail; (5) mostly reasonable detail; (6) reasonable detail-detailed; (7) mostly detailed. Overall session descriptors for these scale points were defined in the manual to assist in the evaluative judgement.

Figure 9  Example of a completed PPCS Coding Form

<table>
<thead>
<tr>
<th>Domain</th>
<th>PARENTAL EXPRESSION of Perspective Tally</th>
<th>Score (1-7)</th>
<th>THERAPIST INTEGRATION of Parent Perspective Tally</th>
<th>Score (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation of child</td>
<td>Detailed</td>
<td>I</td>
<td>Well Integrated</td>
<td>I</td>
</tr>
<tr>
<td>TIME Devoted to Domain</td>
<td>Reasonably Detailed</td>
<td>I</td>
<td>Partially Integrated</td>
<td>I</td>
</tr>
<tr>
<td>Score (1-4) 4</td>
<td>Limited Detail</td>
<td>III</td>
<td>Not Integrated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Detail</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Actions and Strategies</td>
<td>Detailed</td>
<td>I</td>
<td>Well Integrated</td>
<td>I</td>
</tr>
<tr>
<td>TIME Devoted to Domain</td>
<td>Reasonably Detailed</td>
<td>I</td>
<td>Partially Integrated</td>
<td>I</td>
</tr>
<tr>
<td>Score (1-4) 3</td>
<td>Limited Detail</td>
<td>III</td>
<td>Not Integrated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Detail</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Self Disclosures</td>
<td>Detailed</td>
<td>I</td>
<td>Well Integrated</td>
<td>I</td>
</tr>
<tr>
<td>TIME Devoted to Domain</td>
<td>Reasonably Detailed</td>
<td>I</td>
<td>Partially Integrated</td>
<td>I</td>
</tr>
<tr>
<td>Score (1-4) 2</td>
<td>Limited Detail</td>
<td>III</td>
<td>Not Integrated</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>No Detail</td>
<td>I</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time Scores: 4= A lot; 3= Quite a lot; 2= A little; 1= None/very little
Expression Scores: 1= Mostly No Detail; 2= No Detail-Limited Detail; 3= Mostly Limited Detail; 4= Limited Detail-Reasonable Detail; 5= Mostly Reasonable Detail; 6= Reasonable Detail-Detailed; 7= Mostly Detailed
Integration Scores: 1= Mostly Not Integrated; 2= Not integrated; 3= Mostly Partially Integrated; 4= Partially-Well Integrated; 5= Mostly Well Integrated

In the Integration domain early piloting proved it only possible to use three descriptors ‘not integrated’, ‘partially integrated’ and ‘fully integrated’. More fine grained descriptors than this could not be reliably defined and differentiated. Definitions of each descriptor were again
drawn up and illustrated with examples based on quotations from the qualitative analysis. This led to a 5 point overall rating scale for Integration: (1) mostly not integrated; (2) not integrated-partially integrated; (3) mostly partially integrated; (4) partially integrated-fully integrated; (5) mostly fully integrated.

In the time domain 4 points were considered adequate and proved possible to differentiate; (1) never; (2) a little (3) quite a lot (4) a lot. Weighted scores are calculated by multiplying the Expression and Integration scores for each item by the Time score for that item, i.e. Weighted Exp-IOC = Time IOC x Exp-IOC.

Examples of individual and session descriptors are given in the appendix.

Manualisation: An initial draft of the coding manual was developed using examples from the qualitative analysis to illustrate the coding scheme items and help with coding decisions.

**Step 3: Pilot of the Draft PPCS**

After the first 3 sessions of piloting agreement between the two raters was adequate for all items in the Time and Integration domains and for Expression of Parent Actions and Strategies. Two items proved difficult to code reliably – Expression of Self Disclosures and Expression of Interpretation of the Child.

In the case of Parent Self Disclosures inspection of the tallies used to guide the final evaluative judgements showed that one rater was consistently rating ‘detailed’ more frequently than the other. Discussion between the two raters highlighted that the definition needed to emphasise that it was not the depth of feeling that was being coded but the detail with which it was being expressed e.g. a very strong feeling of stress might be indicated in a limited way by a ‘throw-away’ comment – this would still be coded as limited expression, despite the depth of the feeling being alluded to.

In the case of Expression of Interpretation of the Child, the ratings showed relative agreement on the number of ‘reasonably detailed’ tallies but disagreement on the detailed and in particular ‘limited detail’ tallies. In consequence the descriptors for limited detail/reasonable detail /detailed were tightened to allow more explicit differentiation; this included ensuring words such as ‘mostly’ in the session descriptions were more specifically defined as e.g. more than 70% of the time.
The coding manual was revised to reflect these changes and the remaining 6 sessions were coded independently, with no further discussion between raters, as planned.

Mixed effect (single measure) intra class correlations (ICCs) for the weighted Expression and Integration scores for each of the three items are shown in Table 7. ICCS ranged from .72 - .96, representing satisfactory to excellent reliability (Kottner, Audige et al. 2011)

### Table 7: Intra-class correlations for PPCS variables

<table>
<thead>
<tr>
<th>Domain</th>
<th>Theme</th>
<th>ICC*</th>
<th>95% confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted</td>
<td>IOC</td>
<td>.72</td>
<td>.07 - .96</td>
</tr>
<tr>
<td>Expression</td>
<td>PAS</td>
<td>.77</td>
<td>.04 - .96</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.96</td>
<td>.77 - .96</td>
</tr>
<tr>
<td>Weighted</td>
<td>IOC</td>
<td>.89</td>
<td>.20 - .97</td>
</tr>
<tr>
<td>Integration</td>
<td>PAS</td>
<td>.94</td>
<td>.64 - .99</td>
</tr>
<tr>
<td></td>
<td>PSD</td>
<td>.89</td>
<td>.43 - .98</td>
</tr>
</tbody>
</table>

*Mixed effect single measures consistency*

Histograms in Figure 10 show the distribution of weighted scores for each of the six PPCS items for the 9 pilot sessions and indicate a range of scores was observed for each item. Table 8 shows the correlations between items. This indicates that the variables for the three themes IOC, PAS and PSD were largely independent of each other, with no significant correlations between items. For both IOC and PAS however the scores for the expression variable and the integration variable were correlated (IOC r= .847 p<0.01; PAS r=.974 p<0.01); they were not correlated for PSD.

**Figure 10: Distributions of weighted scores for PPCS items**
Table 8: Correlations between PPCS variables

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp-IOC</td>
<td>1.000</td>
<td>-1.773</td>
<td>-0.627</td>
<td>0.847**</td>
<td>-0.167</td>
<td>-0.509</td>
</tr>
<tr>
<td>Exp-PAS</td>
<td>1.000</td>
<td>0.253</td>
<td>-0.112</td>
<td>0.974**</td>
<td>-0.269</td>
<td></td>
</tr>
<tr>
<td>Exp-PSD</td>
<td>1.000</td>
<td>-0.647</td>
<td>0.145</td>
<td>0.563</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int-IOC</td>
<td></td>
<td></td>
<td>1.000</td>
<td>-0.013</td>
<td>-0.394</td>
<td></td>
</tr>
<tr>
<td>Int-PAS</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>-0.300</td>
<td></td>
</tr>
<tr>
<td>Int-PSD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

*Spearman’s 2-tail  *Significant at p<0.05 ** Significant at p<0.01

Discussion

The final version of the Parental Perspectives Coding Scheme, developed with the method described above, is an evaluative coding scheme designed to be used for efficient on-line video coding of specific aspects of parent-therapist interaction in prolonged intervention sessions. The focus of the scheme is on the evaluation of the level of detail in which parents express their perspective on three main themes within therapy sessions and the extent to which therapists integrate this into the ongoing work of the session. Use of Weighted Scores captures aspects of both the quality of expression and integration of parent perspectives in session and the how often they occur.

The findings of the qualitative exploration of the data confirmed that parents do hold beliefs, attitudes and knowledge about a range of issues relevant to intervention and that given the opportunity they will express them during sessions. This extends/complements findings of previous research (Glogowska and Campbell 2000, Marshall, Goldbart et al. 2007) in that it demonstrates within real session data many of the issues that they uncovered through interviewing parents.

The analysis and initial piloting further demonstrated that it is possible to differentiate the views expressed by parents into meaningful categories of perspective that might be theoretically related to different components of the alliance, and that can be reliably coded as individual themes. For example, a potential link with alliance is with discussion of the parent’s perspective on the strategies of the intervention. Dialogue around strategies was a clear theme in the data; the parent’s implementation of the recommended strategies forms the main work of parent training programmes and dialogue on this issue would be expected to relate most strongly task related components of alliance. It has been suggested that open dialogue about client’s disagreements with the therapist, and their subsequent negotiation may increase alliance (Hatcher and Barends 2006, Hayhow 2009). Where parents disagree but, for whatever
reason, do not voice their disagreement alliance is more likely to be negatively affected. The openness and detail with which the parent expresses their agreement, or disagreement, with the strategies proposed by the therapist, and the extent to which the therapist then integrates this into the session, is therefore a potential variable of interest. The design of the coding scheme to differentiate between explicit expressions of perspective (which would be coded detailed) and hints of perspective (which would be coded as limited detail) should be a strength in its utility in investigating research questions related to the alliance, or to other outcomes where some measure of quality or depth rather than simple behaviour counts is required.

The distributions of the scores on the PPCS variables for the 9 pilot sessions indicate that sessions did vary in the extent and detail to which the different categories of perspective were voiced, and subsequently integrated into the session. Despite the fact that the research therapists involved had been trained and supervised to elicit and integrate parent perspective, the pilot data indicated quantifiable differences between the parent-therapist dyads in the pilot sessions. On a community based sample, with less specifically trained therapists and a wider range of parent motivation, differences might be expected to be greater still. The PPCS has been designed to capture these differences and data suggests it has been successful in doing so.

Reliabilities achieved were commensurate with those reported in the literature for other evaluative scheme e.g. 4HCS (Krupat, Frankel et al. 2006) and give confidence that the PPCS can be reliably administered in this context. The derivation of the items in the PPCS from direct analysis of real session data gives the scheme ecological validity. Overall the coding scheme developed can be considered fit for purpose; i.e. it has potential to reliably measure the variable of interest specific to the research question being investigated, in keeping with the recommendations of Street (2013) and (Frankel 2001).

Conclusion

Most published research on health provider-client interaction focuses either on short consultations or small sample sizes. Coding large samples of longer interactions, e.g. therapy sessions of up to an hour, in order to answer research questions about the effect of aspects of this interaction on client outcomes is a challenge, especially where resources are limited. One solution is to develop a coding scheme specifically for the research question that can allow efficient targeted coding whilst watching videos online. This work has shown that qualitative
analysis of a sample of the kind of videos to be analysed can be a useful tool in developing such a scheme. The PPCS is an example of a coding scheme successfully developed using this method; it both evaluates the detail with which parents express their perspective in therapy sessions and the extent to which therapists integrate this into the session, creating variables which can be used in subsequent analysis of the effect of these interaction factors on client outcomes. Though developed for a specific study the scheme could be equally be applied in other research investigating parent-centred interaction. It could also be a useful tool in reflective clinical practice and supervision, evaluating the extent to which a therapist is successful in eliciting and integrating parental perspectives on the three themes included; the parent’s interpretation of the child, the parent’s views of their own actions and strategies of intervention and the parent’s personal self-disclosures.

Appendix for Paper  (Full PPCS manual in thesis Appendix B)

Examples of PPCS item and session descriptors

For the coding manual individual descriptors for each theme in the Expression and Integration domains were defined comprehensively and examples were drawn from the qualitative analysis to assist the observer in making on-line judgements e.g. The ‘Detailed’ descriptor for Interpretation of the Child:

**Detailed**: To be considered a Detailed interpretation the parent should have fully explained what they think and why; the parent should have given examples and/or expanded on what they first said, and/or explained the rationale behind their thoughts. This Detailed expression may be spontaneous or may be in response to therapist exploration of what they first said, or may be in response to a therapist interpretation.

As an observer you are confident that you have a very good understanding not only of what the parent is thinking about their child’s feelings/behaviour/communication/motivation at that instance but also why.

**Example**

Parent:  he likes the idea that I know what to do
Therapist:  So...?
Parent:  he’s enjoying the interaction with me
Therapist:  mm hmmm
Parent:  this is not something he wants to do on his own
Therapist:  no
Parent:  this is something he wants participation with me
Therapist:  so, how is he getting you involved?
Parent:  like he looks at me and he keeps, it’s a sequence so I know what to do.
Definitions of all the descriptors were similarly constructed across themes but worded specifically to each one.

Similarly each point on the overall rating scales was defined in terms of an example session description e.g. Limited Detail- Reasonable Detail in the Expression Domain

4. **Limited Detail-Reasonably Detailed**: The parent gives both Limited Detail and Reasonably Detailed interpretations. There may be occasional examples of either a No Detail interpretation or a Detailed interpretation but these are not characteristic of the session. This is a session where, when interpretation of the child’s communication, behaviour and/ or motivation is the focus of discussion, the parent is consistently giving her interpretation but it is rarely fully explained; rather it is sometimes only indicated in a limited way. As an observer you sometimes know what the parent is thinking, though not in full detail or why, but equally the rest of the time you have to infer.

The final rating score is an overall judgement on the session based on these typical session descriptions. Although the tallies/notes for each descriptor are used to assist in making the overall judgement, the final score is a subjective evaluation, not a count of the tallies.
3.5 Descriptive and factor analyses of the PACT alliance data

Availability of alliance questionnaires: Figures for alliance questionnaire availability are summarised in table 9. At the 3 month time point (T1) therapist-rated alliance questionnaires were available for 71% of cases (55) and parent-rated alliance questionnaires for 60% of cases (46). 43 cases had data available for both therapist and parent. At the 6 month time point (T2) therapist-rated alliance questionnaires were available for 84% of cases (65) and parent-rated questionnaires for 71% of cases (55). 50 cases had both therapist and parent-rated questionnaires available. At 9 months (T3) therapist-rated questionnaires were available for 77% of cases (59) and parent-rated questionnaires for 61% of cases (47). 42 cases had both therapist and parent-rated questionnaires available.

Table 9 Availability of alliance questionnaires

<table>
<thead>
<tr>
<th>Time point</th>
<th>Completed questionnaire</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months (T1)</td>
<td>Parent</td>
<td>46</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Therapist</td>
<td>55</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>43</td>
<td>56%</td>
</tr>
<tr>
<td>6 months (T2)</td>
<td>Parent</td>
<td>55</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Therapist</td>
<td>65</td>
<td>84%</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>50</td>
<td>65%</td>
</tr>
<tr>
<td>9 months (T3)</td>
<td>Parent</td>
<td>47</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>Therapist</td>
<td>59</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>42</td>
<td>55%</td>
</tr>
</tbody>
</table>

Distribution of raw alliance scores: Total raw alliance scores were calculated separately for parent and therapist-rated questionnaires at each of the three time points by summing the item scores. Scores for reverse worded items were first reversed. Up to three missing items were pro-rated; if there were more than three then the alliance score for that case at that time-point was considered missing. Descriptives and normality tests for alliance scores for both parent and therapist-rated data are summarised in table 10.

The original parent questionnaire contained 26 items on a 4 point rating scale such that maximum score possible (highest alliance) was 26; minimum score possible (lowest alliance) was 104. Parent total scores ranged from 26-55 (mean 38.13, sd 8.30) at T1, 26-60 (mean 37.83, sd 8.70) at T2 and 26-50 (mean 35.22, sd 6.87) at T3. Tests for normality of distribution indicated a skew towards lower scores, i.e. higher alliance, with z scores ranging from 0.89 to 1.29 for skewness and from -0.93 to -1.30 for kurtosis. These are not significant for a small to medium sample size; the Kolmogorov-Smirnov test was also non-significant at all three time points. However the Shapiro-Wilks test which is more sensitive in detecting non-normality
was significant at time points T2 and T3. This, combined with visual inspection of the histograms in figure 11, suggested the parent-rated data would best be considered not normally distributed and non-parametric tests used.

Table 10 Distribution of parent-rated and therapist-rated raw alliance scores

<table>
<thead>
<tr>
<th></th>
<th>Parent</th>
<th>Therapist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
</tr>
<tr>
<td>N</td>
<td>45</td>
<td>54</td>
</tr>
<tr>
<td>Distribution</td>
<td>Mean</td>
<td>38.13</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>8.30</td>
</tr>
<tr>
<td></td>
<td>Range</td>
<td>26-55</td>
</tr>
<tr>
<td>Skew</td>
<td>Statistic</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Z score</td>
<td>0.89</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>Statistic</td>
<td>-0.85</td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>Z score</td>
<td>-1.22</td>
</tr>
<tr>
<td>Kolmogorov-</td>
<td>Statistic</td>
<td>0.11</td>
</tr>
<tr>
<td>Smirnov</td>
<td>df</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>sig</td>
<td>.200</td>
</tr>
<tr>
<td>Shapiro -</td>
<td>Statistic</td>
<td>0.96</td>
</tr>
<tr>
<td>Wilks</td>
<td>df</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>sig</td>
<td>.083</td>
</tr>
</tbody>
</table>

$T1 = \text{time point 1 (3 mths)}; T2 = \text{time point 2 (6 mths)}; T3 = \text{time point 3 (9 mths)}$

Figure 11 Distribution of parent and therapist total alliance scores at T1, T2 and T3

The original therapist questionnaire contained 22 items on a 4 point rating scale. The maximum score possible (highest alliance) was 22; minimum score possible (lowest alliance) was 88. Therapist total scores ranged from 22-72 (mean 37.99, sd 9.97) at T1, 22-78 (mean 37.25, sd 11.99) at T2 and 22-78 (mean 38.21, sd 12.09) at T3. Tests for normality of
distribution indicated a distribution skewed towards lower scores, i.e. higher alliance, at all 3 time points. Z-scores for skewness ranged from 2.74 to 3.91 and for kurtosis from 1.51 to 2.67. Assuming the sample size can be considered small-medium this implies that these scores are not normally distributed; Kolmogorov-Smirnov tests were also significant at T1 (D(54) = 0.12, p <0.05) and T2 (D(64) =0.13, p<0.01), but not at T3, confirming the data is not normally distributed at these time points. Shapiro Wilks tests were significant at all 3 time points. Overall this, combined with visual inspection of the histograms, suggested that for therapist-rated raw data non-parametric statistical tests should be used (Field 2009).

**Correlation of Parent and Therapist Scores:** A non-parametric test was conducted due to the data being not normally distributed. Kendall’s tau was chosen since the data set was relatively small and a number of the scores had the same rank (Field 2009). Results are summarised in table 11. Parent-rated and therapist-rated raw scores did not correlate significantly at T1 and T3, but did correlate at T2 tau= .209, p<0.05

Table 11 Parent-therapist raw total score correlations

<table>
<thead>
<tr>
<th>Kendall's Tau</th>
<th>Therapist T1</th>
<th>Therapist T2</th>
<th>Therapist T3</th>
<th>Therapist Mean</th>
<th>Parent T1</th>
<th>Parent T2</th>
<th>Parent T3</th>
<th>Parent Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist T1</td>
<td>1.000</td>
<td>.617**</td>
<td>.456**</td>
<td>.722**</td>
<td>.153</td>
<td>.227**</td>
<td>.334**</td>
<td>.268**</td>
</tr>
<tr>
<td>N=54</td>
<td>N=48</td>
<td>N=40</td>
<td>N=54</td>
<td>N=43</td>
<td>N=39</td>
<td>N=33</td>
<td>N=50</td>
<td></td>
</tr>
<tr>
<td>Therapist T2</td>
<td>1.000</td>
<td>.587**</td>
<td>.810**</td>
<td>.090</td>
<td>.209**</td>
<td>.164</td>
<td>.161</td>
<td></td>
</tr>
<tr>
<td>N=64</td>
<td>N=53</td>
<td>N=55</td>
<td>N=41</td>
<td>N=50</td>
<td>N=43</td>
<td>N=59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapist T3</td>
<td>1.000</td>
<td>.770**</td>
<td>.188</td>
<td>.269**</td>
<td>.165</td>
<td>.191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=55</td>
<td>N=64</td>
<td>N=36</td>
<td>N=47</td>
<td>N=42</td>
<td>N=51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapist Mean</td>
<td>1.000</td>
<td>.451</td>
<td>.151</td>
<td>.237*</td>
<td>.213*</td>
<td>.212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=70</td>
<td>N=45</td>
<td>N=36</td>
<td>N=46</td>
<td>N=64</td>
<td>N=54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent T1</td>
<td>1.000</td>
<td>.594**</td>
<td>.554**</td>
<td>.763**</td>
<td>.661**</td>
<td>.810**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=45</td>
<td>N=36</td>
<td>N=29</td>
<td>N=45</td>
<td>N=54</td>
<td>N=46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent T2</td>
<td>1.000</td>
<td>.661**</td>
<td>.810**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=46</td>
<td>N=39</td>
<td>N=46</td>
<td>N=54</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Parent Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N=65</td>
</tr>
</tbody>
</table>

T1 = time point 1 (3 mths); T2 = time point 2 (6 mths); T3 = timepoint 3 (9 mths)

All tests 2 tail *significant at p<0.05  **significant at p<0.01

**Scores Across Timepoints:** Therapist-rated scores at all timepoints correlated significantly (p<0.01) with each other and with the mean score calculated across timepoints. The same pattern was found for parent-rated total scores i.e. scores at all three timepoints and the mean were significantly (p<0.01) correlated (see table 11). Results of the non parametric Friedman’s repeated measures ANOVA are summarised in table 12. In both cases the test was non-significant confirming that alliance total scores did not differ significantly between time points.
T1, T2 and T3 for either therapist or parent-rated data i.e. ratings of alliance remained statistically stable over time.

Table 12. Friedman’s ANOVA; Total Scores across Timepoints

<table>
<thead>
<tr>
<th>Therapist Total Score</th>
<th>N</th>
<th>df</th>
<th>Test Statistic</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist Total Score</td>
<td>38</td>
<td>2</td>
<td>4.699</td>
<td>0.095</td>
</tr>
<tr>
<td>Parent Total Score</td>
<td>24</td>
<td>2</td>
<td>1.927</td>
<td>0.382</td>
</tr>
</tbody>
</table>

**Between-Therapist Differences:** One way independent ANOVA found no significant between-therapist differences in parent ratings of alliance i.e. parents rated alliance similarly regardless of therapist; F(5, 59) = 1.14 ns. However between-therapist differences were found in therapist ratings of alliance. Welch’s F is reported as Levene’s test was significant (Levene’s statistic (5,64) = 6.82 p<0.001) indicating that the homogeneity of variance assumption had been violated, Welch’s F(5, 27) = 5.34, p<0.01, effect size w= 0.41. Post-hoc tests, using Hochberg’s GT2 correction to account for different sample sizes, showed the effect lay in significant differences between the ratings of therapist 6 and therapist 3; alliance scores for therapist 6 were significantly higher (i.e. she rated alliance as lower) than therapist 3. Although these tests are tolerant of a degree of non-normality of data (Field 2009) these results were confirmed by running the non-parametric independent samples Kruskal-Wallis Test, which was significant for therapist-rated alliance (H(5,70) = 16.95, p<0.01), rejecting the null hypothesis that there was no difference between therapist ratings by therapist, but non-significant for parent-rated alliance (H(5,65)= 6.57 ns) confirming that there was no between-therapist difference in parent ratings of alliance.

**Factor analyses**

**Parent Ratings:** The parent questionnaire consisted of 26 items, 6 of which were reverse worded. Normality tests of individual variables showed that there was generally evidence of some skewing towards lower scores (i.e. higher alliance) but none of the variables had kurtosis of greater than 7, so none were excluded from further analysis on the basis of deviation from normality. An initial correlation matrix showed that no two items were too highly correlated, i.e. with a correlation co-efficient of >.8, which might give rise to collinearity problems. However all the reverse worded items had coefficients of less than .3, indicating that they potentially had no relationship with other variables. Problems with reverse worded items have been reported previously (Hatcher and Gillaspy 2006); it is possible that some raters do not notice the reversing of the scoring and hence the results on these items become unreliable.
Following Field (2009) these were omitted from further analysis. This left 20 items to be entered into the principal components analysis (PCA). Bartlett’s test was significant with these 20 variables (approx. $\chi^2(190) = 673.80$, $p<0.001$) indicating sufficiently large correlations between items for PCA to be undertaken.

An initial analysis was run on the 20 variables to calculate eigenvalues. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.79) indicated that the sample size of 54 was ‘good’ and individual KMO for pairs in the anti-image correlation matrix were all satisfactory at above 0.5 (Field 2009). Initial extraction of factors with eigenvalues greater than 1 resulted in 4 factors. However, for less than 30 variables Kaiser’s criteria state that all communalities should be greater than 0.7; here only half met this criteria and so the 4 factor solution based on eigenvalues was rejected and the scree plot (figure 12) examined. Inflexions suggested a 2 factor solution might be more appropriate and the analysis was rerun selecting a 2 factor solution using an oblique rotation (Oblimin with Kaiser normalisation). This resulted in a theoretically plausible solution, with items loading on factor 1 representing a ‘Belief in Treatment’ component and items loading on factor 2 representing a ‘Belief in Therapist’ component. Table 13 shows the pattern matrix of factor loadings following rotation, with loading of less than 0.4 suppressed. Cronbach’s alpha for the components were Belief in Therapist, Cronbach’s $\alpha = .91$ and Belief in Treatment, Cronbach’s $\alpha = .89$, indicating good internal reliability of the scales. Each component has more than four items with loadings of greater than 0.6, indicating that despite the small sample size, the solution can be considered reliable by Guadagnoli and Velicer (1988) criteria.

Figure 12  Scree plot for parent alliance questionnaire
Table 13. Pattern Matrix for parent-rated alliance

<table>
<thead>
<tr>
<th></th>
<th>Belief in Treatment</th>
<th>Belief in Therapist</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have been able to confide my real problems in relation to my child and they have understood.</td>
<td>.748</td>
<td></td>
</tr>
<tr>
<td>The goals of these sessions are important to me</td>
<td>.729</td>
<td></td>
</tr>
<tr>
<td>I am clear what my responsibilities are in the treatment</td>
<td>.723</td>
<td></td>
</tr>
<tr>
<td>I think this treatment will be a real long term help</td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>I am open and honest in what I say to therapist</td>
<td>.684</td>
<td></td>
</tr>
<tr>
<td>I feel that I understand the nature of the treatment being offered and the reasons for it.</td>
<td>.672</td>
<td></td>
</tr>
<tr>
<td>As a result of these sessions I am clearer as to how I might be able to change things with my child</td>
<td>.665</td>
<td></td>
</tr>
<tr>
<td>What I am doing in the treatment gives me new ways of looking at the situation</td>
<td>.658</td>
<td></td>
</tr>
<tr>
<td>The treatment being offered is going to change the things that I want to change.</td>
<td>.646</td>
<td></td>
</tr>
<tr>
<td>I believe the way we are working with my child’s problems is correct</td>
<td>.627</td>
<td></td>
</tr>
<tr>
<td>The therapist and I work together on setting goals for the treatment</td>
<td></td>
<td>-.878</td>
</tr>
<tr>
<td>I believe the therapist likes me as a person</td>
<td></td>
<td>-.780</td>
</tr>
<tr>
<td>Relationship with the therapist is very important to me</td>
<td></td>
<td>-.692</td>
</tr>
<tr>
<td>I believe the therapist is genuinely concerned for my child’s welfare</td>
<td></td>
<td>-.652</td>
</tr>
<tr>
<td>The therapist and I trust one another</td>
<td></td>
<td>-.620</td>
</tr>
<tr>
<td>I am confident in my therapist’s ability to help me help my child</td>
<td></td>
<td>-.587</td>
</tr>
<tr>
<td>Therapist and I respect each other</td>
<td></td>
<td>-.531</td>
</tr>
<tr>
<td>We agree on what work is important</td>
<td></td>
<td>-.526</td>
</tr>
<tr>
<td>My therapist understands what I am trying to accomplish in the treatment</td>
<td>.410</td>
<td>-.436</td>
</tr>
<tr>
<td>I believe the time the therapist and I are spending together is spent efficiently</td>
<td>.433</td>
<td></td>
</tr>
</tbody>
</table>


Therapist Ratings: The therapist questionnaire consisted of 22 items with 5 items reverse worded. Normality tests for individual items, alongside a correlation matrix of variables indicated that the therapist-rated data were generally more problematic for factor analysis than the parent data. A number of items showed high values of skew and kurtosis. Two of the five reverse worded items had correlation coefficients of less than .3 indicating that they may not be related to other variables; these 2 items were also amongst those with significant normality issues and it was decided to exclude them from the analysis on this basis. Five items had correlation coefficients greater than .8 with 5 or more other items, indicating potential significant issues with collinearity, an observation corroborated by Haitovsky’s test on the determinant of the matrix.

The sample size of 64 was good (KMO =0.911) and individual KMOs for pairs in anti-image correlation matrix were all above .5 as required. Bartlett’s test was significant (approx. χ²(190) = 1225.51, p<0.001) indicating sufficient correlation between variables for PCA to be appropriate.

With reservations in mind regarding possible collinearity in the data, exploratory PCA was carried out on 20 variables. Eigenvalues over 1 were obtained for 3 components, but again
Kaiser’s criteria of all communalities greater than .7 was not met. Examination of the scree plot (figure 13) was ambiguous; inflexions suggested either 1 or 3 components.

Figure 13 Scree plot for therapist alliance questionnaire

PCA with 3 factors and an oblique rotation (Oblimin with Kaiser normalisation) resulted in potentially theoretically meaningful components. Factor loadings onto individual items following rotation are shown in table 14. Factor 1 seems to represent a ‘Right Treatment’ factor, encompassing the therapist’s belief that this is the right treatment for the parent/child, taking into account their perceptions of parent’s goals, understanding and commitment to the treatment. Factor 2 is a ‘Bond’ factor, including items related to trust, respect and liking. Factor 3 seems to represent a ‘Perception of Parent Engagement’ factor, involving items pertaining to the therapist’s impression of parent’s active engagement with the treatment within sessions. Internal reliability for the three components was good, Right Treatment Cronbach’s $\alpha = .92$; Bond Cronbach’s $\alpha = .89$; Perception of Parental Engagement Cronbach’s $\alpha = .92$. However seven items fell onto two components with similar loadings, requiring some creativity in interpretation and making it difficult to conclude that the three components are sufficiently distinct. One item failed to load onto any of the components. The 3 component solution is not completely satisfactory, either from a theoretical or statistical standpoint and it could be equally argued that, given the issues with collinearity, a unidimensional solution i.e. with no underlying components is justified. Cronbach’s alpha for the single scale was similarly good; Total Alliance (Cronbach’s $\alpha = .95$).
Table 14 Pattern matrix: Therapist alliance questionnaire

<table>
<thead>
<tr>
<th></th>
<th>Right Treatment</th>
<th>Bond</th>
<th>Parent Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe the way we are working with the child’s problems is correct</td>
<td>.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The parent makes an effort to attend sessions.</td>
<td>.817</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The treatment will be a real help in this case.</td>
<td>.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The treatment offered will meet the parent’s own goals for change.</td>
<td>.630</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have established a good understanding of the kind of changes that would be good for the child</td>
<td>.550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The parent uses therapeutic sessions appropriately and is motivated towards them.</td>
<td>.535</td>
<td>.428</td>
<td></td>
</tr>
<tr>
<td>The parent is committed to the treatment.</td>
<td>.521</td>
<td></td>
<td>.417</td>
</tr>
<tr>
<td>The parent is committed to the treatment.</td>
<td>.417</td>
<td></td>
<td>.521</td>
</tr>
<tr>
<td>On a personal level, I like the parent.</td>
<td>.942</td>
<td>.797</td>
<td></td>
</tr>
<tr>
<td>I consider I have achieved accurate empathic understanding of the parent’s difficulties in relation to their child.</td>
<td>.695</td>
<td>.485</td>
<td></td>
</tr>
<tr>
<td>The parent and I respect each other.</td>
<td>.471</td>
<td></td>
<td>.483</td>
</tr>
<tr>
<td>I have difficulty in getting the parent to take part in therapeutic activities.</td>
<td>.403</td>
<td></td>
<td>.411</td>
</tr>
<tr>
<td>The parent appears resistant towards the intervention, overtly or covertly.</td>
<td>.400</td>
<td></td>
<td>-.864</td>
</tr>
<tr>
<td>I do not feel we are using the time together efficiently.</td>
<td>.749</td>
<td></td>
<td>-.863</td>
</tr>
<tr>
<td>The parent has the capability to make good progress in the treatment</td>
<td>.597</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that the parent is able to understand and accept my viewpoint in sessions.</td>
<td>.481</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are working towards mutually agreed upon goals.</td>
<td>.401</td>
<td></td>
<td>.493</td>
</tr>
<tr>
<td>The parent has understood and accepted the nature of the treatment and the reason for its use.</td>
<td>.407</td>
<td></td>
<td>.481</td>
</tr>
</tbody>
</table>

a. Rotation converged in 19 iterations. Values below .4 suppressed.

Alliance variables.

A full discussion of the findings of the descriptive analyses of the alliance data is contained in the Discussion chapter, Section 4.1. Based on the above preliminary analyses the following decisions were made in relation to the alliance variables to be used in the study analyses:

- Lack of correlation between parent-rated and therapist-rated alliance scores confirmed that separate analyses should be conducted for each.
- Relative stability of alliance ratings across time points indicated that it would be justifiable to use mean alliance scores in subsequent analyses. This allowed cases with alliance data missing at T1 to be included thus maximising the available sample size.
- Preliminary explorations of the data for factor analysis indicated that the 6 reverse worded items in the parents questionnaire may not have been reliably rated by parents; these were therefore excluded from the total alliance score, which was finally made up
of 20 items as indicted in appendix A. Parent-rated alliance variables to be used in subsequent analyses were therefore Total alliance score (20 items) and two underlying component scores, Belief in Treatment (10 items) and Belief in Therapist (10 items).

- The main therapist-rated alliance variable to be used was Total alliance score (22 items). The three underlying component scores, Right Treatment, Bond and Perception of Parent Engagement were to be looked at in an exploratory manner only given the reservations about the 3 factor solution.

Table 15 and figure 14 summarise the distributions of the final mean alliance total scores for both parents and therapists. In both cases the data is best considered non-parametric. For parent-rated mean alliance scores the z-score for kurtosis (-2.08) and the significant results of both the Kolmogorov-Smirnov (p<0.05) and Shapiro-Wilks tests (p<0.01) indicate that the data is not normally distributed. For therapist-rated mean alliance scores the z-score for skew (2.37) and the significance of the Shapiro-Wilks test (p<0.05) suggest the data is also best considered non-parametric.

Table 15 Distributions of finalised mean alliance scores

<table>
<thead>
<tr>
<th></th>
<th>Parent Mean Total Alliance (20 items)</th>
<th>Therapist Mean Total Alliance (22 items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>30.51</td>
<td>37.57</td>
</tr>
<tr>
<td>SD</td>
<td>7.09</td>
<td>10.43</td>
</tr>
<tr>
<td>Range</td>
<td>20.0-44.0</td>
<td>22.3-65.3</td>
</tr>
<tr>
<td>Skew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistic</td>
<td>0.26</td>
<td>0.71</td>
</tr>
<tr>
<td>SE</td>
<td>0.30</td>
<td>0.30</td>
</tr>
<tr>
<td>Z score</td>
<td>0.88</td>
<td>2.37</td>
</tr>
<tr>
<td>Kurtosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistic</td>
<td>-1.23</td>
<td>0.23</td>
</tr>
<tr>
<td>SE</td>
<td>0.59</td>
<td>0.59</td>
</tr>
<tr>
<td>Z score</td>
<td>-2.08</td>
<td>0.38</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov</td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>sig</td>
<td>.012</td>
<td>.200</td>
</tr>
<tr>
<td>Shapiro-Wilks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>sig</td>
<td>.003</td>
<td>.012</td>
</tr>
</tbody>
</table>

Figure 14 Distributions of Therapist and Parent Mean Alliance
3.6 PAPER 3
Precursors of therapeutic alliance in a parent-mediated intervention for autism.

Abstract

**Background:** Evidence on baseline and process factors relating to quality of therapeutic alliance in parent-mediated interventions is limited. This study investigates the relationship between parent-therapist alliance and a range of baseline and process factors, including variables for causal beliefs and the quality of dialogue around parental perspectives.

**Sample:** 77 parents and 6 therapists who participated in a RCT of a parent-mediated intervention for autism (PACT).

**Method:** Therapeutic alliance was rated separately by parents and therapists using the PACT alliance measures. Baseline variables comprised parent demographic variables, parent causal belief variables, and an average therapist fidelity variable. Process variables were parental Expression and therapist Integration of parental perspectives, measured on the Parental Perspectives Coding Scheme (PPCS), developed specifically for the study. 120 sessions from a purposive high-low parent-rated alliance subsample of 20 cases were coded on the PPCS. Initial univariate analyses identified significant baseline and process variables to include in separate multivariate models of parent-rated and therapist-rated alliance.

**Results:** Parent-rated and therapist-rated alliance did not correlate. PPCS Expression and Integration scores were higher in the high parent-rated alliance group but the difference was non-significant. Parents who cited MMR as a possible cause of autism in their child rated the alliance lower than those who did not (p<0.05) and parents with no post-16 qualifications rated the alliance higher (p<0.05). A multiple regression model including the two factors in a single step explained 18.3% of variance in parent-rated alliance. Therapist-rated alliance associated positively with therapist fidelity (p<0.01) and with PPCS Expression and Integration variables (p<0.01). A hierarchical multiple regression model (1. Fidelity, 2. Expression, 3. Integration) explained 58.8% of variance in therapist-rated alliance.

**Conclusions:** Therapists should be aware that parents may rate the alliance differently from themselves and that different factors associate with their ratings. Parents’ causal beliefs and level of education may influence their ratings of alliance in specific interventions.
Introduction

The involvement of parents in intervention for young children with autism, through parent mediated programs such as PACT (Green, Charman et al. 2010), Hanen More than Words (Sussman 1999), Early Bird (Shields 2001), Jasper (Kasari, Freeman et al. 2006) is current good practice (Le Couteur 2003, NICE 2013). Such interventions necessitate the establishment of an effective working relationship between the therapist and the parent. Therapeutic alliance is a construct, first described in psychiatry but now used in a wide range of health contexts, to measure the quality of the working relationship between therapist and client. Seminally described by (Bordin 1979), the therapeutic alliance has attracted significant research interest, both in terms of the association of alliance with outcomes and in terms of factors promoting a strong alliance. Meta-analyses have shown a small but consistent relationship between quality of alliance and outcome for both adult (Martin, Garske et al. 2000, Horvath, Del Re et al. 2011) and child/youth clients (Shirk and Karver 2003, Shirk, Karver et al. 2011). This relationship with outcome has in turn encouraged research into variables contributing to the establishment of alliance. Much of this has focussed on client characteristics, such as pre-treatment personality (Muran, Segal et al. 1994, Connolly Gibbons, Crits-Christoph et al. 2003, Sexton, Littauer et al. 2005) or attachment status (Diener, Hilsenroth et al. 2009, Smith, Msetfi et al. 2010) and demographic factors including therapist and client ethnic match (Farsimadan, Draghi-Lorenz et al. 2007) and socio-economic status (Balmforth 2009). Other studies have investigated therapist factors, reporting a range of therapist characteristics and techniques that contribute significantly to alliance formation (Ackerman and Hilsenroth 2003, Baldwin, Wampold et al. 2007), including therapist fidelity to the treatment model (Brauhardt, de Zwaan et al. 2014).

Therapeutic alliance with parents: Although it is good practice in child treatments to include other members of the family it is only more recently that studies have specifically investigated parent-therapist alliance in parent training/parent-mediated interventions. Parent-therapist alliance has been found to be related to child outcome (Green, Kroll et al. 2001, McLeod and Weisz 2005, Kazdin, Whitley et al. 2006, Myers 2008), change in parenting practices (Kazdin, Whitley et al. 2006, Kazdin and Whitley 2006) and treatment retention (Hawley and Weisz 2005). Research on baseline and process factors that associate with high parental alliance is so far limited; correlations with pre-treatment family functioning (Green, Kroll et al. 2001) and parental pre-treatment social relations (Kazdin and Whitley 2006) have been reported.
Parental perspectives and alliance: There is little empirical evidence of factors that contribute to the establishment of high alliance specifically with parents. Factors that are important for alliance with direct adult clients may also be relevant for parents and could be investigated; other factors may arise from the indirect nature of the therapeutic relationship whereby the parent is not the direct client but rather an intermediary client for their child. Reports in the literature suggest that a parent’s perspectives on therapy may be relevant. As an intermediary client for their child a parent does not themselves have the presenting disorder, as would be the case in a direct therapeutic relationship; they will however have amassed knowledge and beliefs about their child’s condition. There is a small but useful body of mostly qualitative research about factors that may influence the way parents approach intervention, including for example the parent’s beliefs and understanding about their child’s disorder (Marshall, Goldbart et al. 2007), their ideas about what might be effective intervention (Briggs 1998, Marshall, Goldbart et al. 2007, Hayhow 2009), their confidence in managing their child’s difficulties (Hastings, Kovshoff et al. 2005) and their own state of mental health and well-being (Bromley, Hare et al. 2004, Quintero and McIntyre 2010). In the specific case of parents of children with autism, many hold strong and wide ranging beliefs about the cause of autism and of likely prognosis (Dale, Jahoda et al. 2006, Harrington, Patrick et al. 2006) which may influence the type of intervention they think will be effective. Parents have often been considered to be a homogenous group in clinical practice (Hanna and Rodger 2002), however there is increasing recognition of the need to consider their individual perspectives and to understand their beliefs and accounts in order to intervene effectively (Briggs 1998, Glogowska and Campbell 2000, Marshall, Goldbart et al. 2007); failure to discuss these with parents can leave them with a perception that therapy is not helpful to them (Hanna and Rodger 2002, Glogowska and Campbell 2004), potentially weakening the parent-therapist alliance. This becomes particularly salient given parallel evidence that parents and therapists’ beliefs and perspectives are often not aligned (Stone and Rosenbaum 1988, Marshall, Goldbart et al. 2007). The extent to which a therapist and parent are able to openly discuss their beliefs and perspectives, and address any differences in terms of the intervention being offered may affect their ability to form a strong alliance. Hatcher and Barends (2006) suggest that ‘open and effective encounter with the client’s disagreement or doubt about the treatment deserves greater emphasis. Handled well this disagreement can lead to a stronger alliance.’

In summary, there is evidence to justify investigating both parents’ initial causal beliefs and therapists’ in-session elicitation and integration of parent’s perspectives as factors in the establishment of a strong working alliance. Such elicitation could be considered to reflect
therapist characteristics of being interested, respectful, confident and open, all of which have previously been proposed as potential determinants of alliance (Ackerman and Hilsenroth 2003). Parents may be influenced to reveal information such as underlying beliefs through the use of good therapist interpersonal skills, in particular empathy - this then may lead to the parent feeling better understood and more willing to comply with the intervention, thereby further increasing alliance (Bohart 2000, Ackerman and Hilsenroth 2003). Clinically this is a potentially useful line of study since, should an association with alliance be found, it ought to be possible to train therapists to effectively elicit and integrate parent perspective.

**Aims**

The aim of the study was to investigate baseline and process factors associated with high quality alliance, as rated by a) parents and b) therapists, in a parent mediated intervention for children with autism. Baseline factors comprised demographic factors (family income category, intervention parent’s highest qualifications, parent-therapist ethnic match); parental causal beliefs and therapist average fidelity; process factors were the quality of parent expression and therapist integration of parent perspectives. In particular the following predictions were made:

*Parent-therapist dialogue that contains greater parental expression of underlying perspectives will be associated with higher therapeutic alliance as rated by a) parents and b) therapists.*

*Parent-therapist dialogue that contains greater therapist integration of expressed parental perspectives will be associated with higher therapeutic alliance, as rated by a) parents and b) therapists.*

**Methods**

**Setting:** This study drew on data collected during the Pre-School Autism Communication Trial (PACT; (Green, Charman et al. 2010). PACT was a randomised control trial of a parent-mediated intervention for autism conducted in the UK across three sites, London, Manchester and Newcastle Upon Tyne. Parents of young children with autism (age 2:11 to 4:11) were referred to the trial by their GP or paediatrician and were randomly allocated to either the intervention (77 cases) or treatment as usual (75 cases) arms of the trial. Six research therapists delivered the trial intervention, two at each site; all were qualified speech and language therapists previously experienced in working with children with autism and were specifically trained and supervised in the intervention. The PACT study was approved by the Central
Manchester Multi-Centre Research Ethics Committee. Participants gave written informed consent, including for the use of video recordings in the research.

In the intervention arm parents received a 12 month individual intervention aimed at optimising their interaction with their child in such a way as to promote the development of the child’s communication and social interaction. Therapists filmed the parent interacting with the child and used the video as a basis for feedback discussion with the parent; these discussions, which lasted 30-60 minutes, were also filmed and comprise the parent-therapist dialogue data analysed in the study. The PACT style of intervention specifically encourages therapists to elicit and value parental observations and perspectives throughout the therapy session.

**Sample:** All 77 PACT intervention cases were included in the main sample in which associations between alliance and baseline variables of demographic factors, parental causal beliefs and therapist average fidelity were investigated. Parents from the 77 PACT intervention cases varied in demographic characteristics (see table 16), with a range of socio-economic status, education level, ethnicity, and age being represented. 75 parents were mothers, 2 fathers.

<table>
<thead>
<tr>
<th>Family Income Category</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20K</td>
<td>20</td>
<td>26.3%</td>
</tr>
<tr>
<td>20-40K</td>
<td>23</td>
<td>30.3%</td>
</tr>
<tr>
<td>&gt;40K</td>
<td>33</td>
<td>43.4%</td>
</tr>
<tr>
<td>Missing Data</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Intervention Parent Ethnicity**

<table>
<thead>
<tr>
<th>Intervention Parent Ethnicity</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>51</td>
<td>68.0%</td>
</tr>
<tr>
<td>Non-White</td>
<td>24</td>
<td>32.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Intervention Parent Education Level**

<table>
<thead>
<tr>
<th>Intervention Parent Education Level</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No post-16 qualifications</td>
<td>21</td>
<td>28.4%</td>
</tr>
<tr>
<td>Post-16 qualifications</td>
<td>53</td>
<td>71.6%</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*from Green, Charman et al. (2010)*

The 6 therapists were all registered speech and language therapists and formed a more homogenous group, all being white, female, of middle to high family income, and undergraduate educated or above. All were experienced in working with children with autism and their families.

A smaller subsample of 20 PACT intervention cases was selected for coding and investigating the process variables, expression and integration of parental perspective. Purposive high/low parent-rated alliance sampling was used to maximise the variation in the sample; the 10 highest
parent-rated alliance cases and the 10 lowest parent-rated alliance cases were selected for the sample. Demographic data for the 20 cases in the PPCS sub-sample are summarised in Table 17. 5 therapists were represented, one with 6 cases, three with 4 cases and one with 2 cases. All therapists were female, 18 parents in the sub-sample were mothers, and 2 were fathers.

Table 17. Demographic data PPCS sub-sample; N=20

<table>
<thead>
<tr>
<th>Family Income Category</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20K</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>20-40K</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>&gt;40K</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Missing Data</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention Parent Ethnicity</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>14</td>
<td>74%</td>
</tr>
<tr>
<td>Non-White</td>
<td>5</td>
<td>26%</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention Parent Education Level</th>
<th>N</th>
<th>Valid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No post-16 qualifications</td>
<td>4</td>
<td>21%</td>
</tr>
<tr>
<td>Post-16 qualifications</td>
<td>15</td>
<td>79%</td>
</tr>
<tr>
<td>Missing Data</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Measures and Procedures:

Alliance measure: Since there were no published alliance scales available specifically for parents, parent and therapist versions of a PACT alliance questionnaire were developed for the trial by expert consensus within the trial team. These comprised items from the Working Alliance Inventory (Horvath and Greenberg 1989) generally used for adults in psychiatry settings, and from the Family Engagement Questionnaire (Green, Kroll et al. 2001) developed for use with families of young people in in/outpatient psychiatric settings. Adaptations to the wording of items were made to suit the context of parents of children with autism (appendix A). Alliance data were collected for all 77 cases in the intervention arm at 3 time points during the 12 month intervention; at 3 months (T1), at 6 months (T2) and at 9 months (T3). Parents and therapists were separately sent questionnaires from the research office; questionnaires were returned to the research office. The original parent questionnaires contained 26 items for parents, 6 of which were reverse-worded and 22 items for therapists. Items were scored on a 1-4 scale.

Principal components analysis (PCA) with direct oblimin rotation was carried out to investigate the factor structure of the alliance measure. Inspection of the initial correlation matrix indicated that reverse worded items in the parent questionnaire did not correlate sufficiently with other items to be included in the analysis suggesting that they may not have been reliably completed. These items were therefore excluded and 20 items retained. PCA confirmed two underlying parent-rated alliance components, Belief in Therapist (Cronbach’s α = .91) and Belief in Treatment (Cronbach’s α = .89), with 10 items in each. Parent-rated
alliance scores from the revised questionnaire could therefore range from 20-80 for Total Alliance, and 10-40 for each of the underlying components, with a lower score representing higher alliance in all cases.

The therapist version of the questionnaire contained 22 items. PCA suggested a unidimensional solution, Total Alliance (Cronbach’s $\alpha = .95$) was appropriate for therapist-rated data, i.e. there were no clear underlying components found. Therapist Total Alliance scores could therefore range from 22 to 88, again with a lower score representing higher alliance.

Completed parent-rated alliance questionnaires were available for 60% of cases at T1, 71% at T2 and 61% at T3; for therapists the corresponding figures were 71% at T1, 84% at T2 and 77% at T3. Friedman’s repeated measures ANOVA of the alliance scores across time points was non-significant, indicating that both parent-rated ($F(2) = 1.927; \text{ns}$) and therapist-rated ($F(2) = 4.699; \text{ns}$) alliance remained statistically stable across the three time points. Mean scores across time points were therefore calculated and selected as the alliance variable in order to maximise the sample size available.

*Parent demographic data* were collected during interview by trained research assistants using a standardised form to assign categories. Data collected on family income, intervention parent, highest level of qualification, and therapist-intervention parent ethnic match were extracted from the PACT database for this study.

*Causal belief data* were collected by the intervention therapists during the initial home visit as part of a semi-structured interview. Parents were asked an open question on what they believed was the cause of autism in their child; responses were recorded on a standard form. Thematic analysis of all responses resulted in 4 main groups of causal beliefs (MMR belief, Genetic Belief, Pregnancy/Birth Belief, Other); as many parents cited more than one causal belief each belief was treated as an individual dichotomous variable, with each case coded 1 or 0 for presence or absence of the belief.

*Therapist fidelity* to the intervention manual was assessed for individual therapists by independent members of the PACT research team using a fidelity measure (maximum score 14) developed for the trial; 5% sessions, representing 7 to 8 sessions per therapist, were randomly chosen session and double rated. An average fidelity score was calculated for each therapist.
The Parent Perspective Coding Scheme: The Parent Perspective Coding Scheme (PPCS) was developed for this study specifically to measure both the expression and the integration of parent perspective into the intervention sessions (Taylor, Callery et al., in preparation). The PPCS is a video based scheme; coders observe the session video and subjectively rate the interaction on-line using a standardised scoring sheet. Items in the scheme were developed from a qualitative analysis of the themes on which parents expressed their perspective within PACT sessions. Coders rate the interaction in terms of three main themes of dialogue 1) Interpretation of the Child (IOC); including the child’s behaviour, communication, motivation 2) Parent Actions and Strategies (PAS); including the parent’s explanations for her actions in the dyadic interaction and her perspective on the interaction strategies suggested by the therapist 3) Parent Self Disclosures (PSD); including the parent’s underlying beliefs, feelings and other personal disclosures. For each of these three themes coders give a score for Expression i.e. the level of detail in which the parent expresses their perspective on the theme, and for Integration i.e. the extent to which the therapist integrated the parent’s expressed perspective into the session. Thus, for each session, 6 individual PPCS variables are scored (Exp-IOC, Exp-PAS, Exp-PSD, Int-IOC, Int-PAS, Int-PSD). Coders make tallies/notes on the score sheet for individual episodes whilst observing the video and use these tallies to assist in giving a final subjective overall score for each of the PPCS variables. Additionally for each of the three themes, IOC, PAS and PSD, coders make a subjective judgement of the proportion of time in the session devoted to that theme. This score is used to weight each of the PPCS variables, such that the weighted score for each variable for that session reflects both the quality of the expression and integration of parent perspective on the theme, and frequency with which it is discussed. In this way, for example, a session in which the parent frequently expresses her interpretation of her child in detail will score more highly on the Exp-IOC variable than a parent who also expresses her perspective in detail but only once or twice in the session.

For the 20 cases in the PPCS subsample feedback videos of all 6 sessions up to the three month alliance time point were coded on the PPCS. All rating was conducted blind to alliance group i.e. the rater did not know whether the cases were from the high or low alliance rated group. A mean score across the 6 sessions was then calculated for each of the 6 weighted PPCS variables to obtain a single score representative of the case e.g. Mean Exp-IOC = (Sum of Exp-IOC sessions 1-6)/6. Finally for each case composite scores for expression (∑-Exp) and for integration (∑-Int) were calculated by summing the mean scores for all 3 expression variables and for all 3 integration variables respectively.
\[ \Sigma_{\text{Exp}} = \text{Mean Exp-IOC} + \text{Mean Exp-PAS} + \text{Mean Exp-PSD} \]

\[ \Sigma_{\text{Int}} = \text{Mean Int-IOC} + \text{Mean Int-PAS} + \text{Mean Int-PSD} \]

All sessions were initially coded by a single trained coder (20 cases; 120 sessions), with 10% double coded by a second rater who had been trained in the coding system to reliability. Intra Class Correlations (ICC, 2 way mixed model, consistency, single measures) of time-weighted raw scores for the individual PPCS items ranged from .56 - .83 (see table 18) indicating reliability ranging from satisfactory to excellent.

Table 18. Intra-Class Correlations for PPCS items

<table>
<thead>
<tr>
<th></th>
<th>ICC*</th>
<th>95% Confidence Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Exp-IOC</td>
<td>.83</td>
<td>.50</td>
</tr>
<tr>
<td>Exp-PAS</td>
<td>.71</td>
<td>.26</td>
</tr>
<tr>
<td>Exp-PSD</td>
<td>.74</td>
<td>.32</td>
</tr>
<tr>
<td>Int-IOC</td>
<td>.78</td>
<td>.41</td>
</tr>
<tr>
<td>Int-PAS</td>
<td>.64</td>
<td>.13</td>
</tr>
<tr>
<td>Int-PSD</td>
<td>.56</td>
<td>.01</td>
</tr>
</tbody>
</table>

*2 way mixed; consistency; single measures

Statistical Analyses

**Step 1: Univariate analyses**

**Baseline variables and alliance:** Visual inspection, alongside tests for normality of the distribution, indicated that both parent-rated mean alliance and therapist-rated mean alliance in the full PACT intervention sample were non-parametric (Parent: z score skew .88; kurtosis -2.08; Shapiro Wilks statistic (64) = 0.94 p<0.01; Therapist: z scores: skew 2.37; kurtosis 0.38; Shapiro Wilks statistic (64) = 0.95 p<0.05). The use of non-parametric tests was therefore indicated. The following univariate analyses were conducted within the 77 case PACT intervention sample:

- Demographic variables (family income, parent highest qualifications, parent-therapist ethnic match), parent-rated and therapist-rated alliance; independent samples tests (Mann Whitney U/ Kruskal Wallis) with demographic category as the grouping variable and alliance as the dependent variable.
- Causal beliefs variables (MMR, Genetics, Pregnancy/Birth, Other) and parent-rated alliance; independent samples tests (Mann Whitney U) with dichotomous (Yes/No) causal belief category as the grouping variable and alliance as the dependent variable.
- Therapist fidelity, parent-rated, and therapist-rated alliance; Kendall’s tau correlation
PPCS variables and alliance: The PPCS sub-sample was chosen purposively to comprise the 10 highest parent-rated mean alliance cases and 10 lowest parent-rated mean alliance cases, resulting in a non-parametric distribution of alliance. Nonparametric tests were therefore indicated for analyses of PPCS variables and parent-rated alliance. Parent and therapist-rated alliance scores did not correlate and therapist-rated scores were more evenly spread. Visual inspection and tests indicated that the therapist-rated data in this smaller subsample could be considered normally distributed (skew = 0.98, SE 0.51, z-score 1.91; kurtosis = 0.60, SE .99, z-score 0.60; Shapiro Wilks statistic (20) = .90, ns). All the PPCS individual and composite variables, with the exception of Integration of Parent Self Disclosures (Int-PSD), were also normally distributed. Parametric tests were therefore appropriate for analyses of therapist-rated alliance and PPCS data.

The following univariate analyses were conducted within the 20 case PPCS sample:

- PPCS variables (Exp-IOC, Exp-PAS, Exp-PSD, Int-IOC, Int-PAS, Int-PSD, ∑-Exp, ∑-Int) and parent-rated alliance; independent samples Mann Whitney U test, with alliance grouping (High alliance/Low Alliance) as grouping variable and PPCS scores as dependent variable.

Step 2: Multivariate analyses

Any variables in step 1 that showed significant univariate associations with parent-rated or therapist-rated alliance were then included in hierarchical regression analyses, with alliance as dependent variable. Significant baseline variables were entered as independent variables in the first step, followed by any novel process variables in subsequent steps.

Results

Variable descriptives: For the 77 PACT intervention cases mean parent-rated Total Alliance scores ranged from 20.0 to 44.0 (mean 30.5, sd 7.0); Belief in Therapist component scores from 10.0 to 21.5 (mean 14.0, sd 3.6); Belief in Treatment component scores from 10.0 to 22.5 (mean 14.7, sd 3.5). Mean therapist-rated scores for Total Alliance ranged from 22.3 to 65.3 (mean 37.8, sd 10.5) and therapist average fidelity ranged from 12.0 to 13.7 (mean 12.8 sd 0.7). The numbers of parents ascribing to the four causal beliefs categories were: MMR (Yes 20/No 50) Genetics (Yes 19/No 51); Pregnancy/Birth (Yes 15/ No 55); Other (Yes 26/ No
In the 20 case PPCS subsample the high parent-rated alliance group scores ranged from 20 to 24 (mean 22.7 SD 1.3), with the low parent-rated alliance group scores ranging from 35 to 44 (mean 39.1 SD 2.5). Independent samples t-test confirmed that the groups differed significantly in alliance ratings (t(18) = 18.75 p<.001). Therapist-rated scores were more evenly spread, ranging from 24 to 65.3 (mean 36.0, SD 11.34) and normally distributed.

**Step 1 Univariate Analyses**

*Baseline Variables and alliance*

*Parents:* Significant differences in parent-rated alliance were found for two variables, Belief in MMR and Parent Post-16 Qualifications (table 19). Parents who cited MMR as a possible cause of their child’s autism rated the alliance significantly lower i.e. higher score (med 34.7) than parents who did not (med 29.1); Total Alliance: Mann-Whitney U(60) = 508.5, p<0.05. When analysed for the alliance components separately the differences did not reach significance; Belief in Therapist U(60) = 479.0, p=0.062 ns; Belief in Treatment U(60) = 469.0, p=0.089 ns. Parents with no post-16 qualifications rated the alliance significantly higher i.e. lower score (med 26.0) than parents with post-16 qualifications (med 31.6); U(62) = 531.00 p<0.05. When analysed separately this difference was significant for the Belief in Treatment component, U(62) = 564.00 p<0.01 but just outside significance for the Belief in Therapist component U(62) = 518 p=0.058 ns. Tests for all other variables i.e. family income, parent-therapist ethnic match, therapist fidelity and Genetic, Pregnancy/Birth and Other causal beliefs were non–significant.

Table 19. Parent-rated alliance and baseline variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Test</th>
<th>N</th>
<th>Total Alliance</th>
<th>Belief in Treatment</th>
<th>Belief in Therapist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Statistic</td>
<td>Sig</td>
<td>Statistic</td>
</tr>
<tr>
<td>Family Income (&lt;£20K;£20-40K;&gt;£40K)</td>
<td>Kruskall-Wallis</td>
<td>64</td>
<td>0.42</td>
<td>.809</td>
<td>0.10</td>
</tr>
<tr>
<td>Parent Qualifications (Post 16/No post 16)</td>
<td>Mann Whitney U</td>
<td>62</td>
<td>531.0</td>
<td>.036*</td>
<td>564.0</td>
</tr>
<tr>
<td>Parent Therapist Ethnic Match (Yes/No)</td>
<td>Mann Whitney U</td>
<td>63</td>
<td>323.5</td>
<td>.296</td>
<td>337.0</td>
</tr>
<tr>
<td>MMR Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>60</td>
<td>508.5</td>
<td>.019*</td>
<td>469.0</td>
</tr>
<tr>
<td>Genetics Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>60</td>
<td>306.5</td>
<td>.596</td>
<td>296.5</td>
</tr>
<tr>
<td>Pregnancy/Birth Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>60</td>
<td>382.5</td>
<td>.290</td>
<td>410.0</td>
</tr>
<tr>
<td>Therapist Fidelity</td>
<td>Kendall's tau</td>
<td>70</td>
<td>-.137</td>
<td>.139</td>
<td>-.156</td>
</tr>
</tbody>
</table>

*p<0.05 **p<0.01
Therapists: A significant association was found between therapist-rated alliance and therapist fidelity to the PACT intervention (tau= -.237, p<0.01). Therapists who were independently rated as maintaining higher average fidelity rated the alliance significantly higher (lower score) than those with lower average fidelity. Tests for all other variables, i.e. family income, parent-therapist ethnic match, and all categories of parent causal beliefs, were non-significant (table 20).

Table 20. Therapist-rated alliance and baseline variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Test</th>
<th>N</th>
<th>Total Alliance Statistic</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Income (&lt;£20K,£20-40K,&gt;£40K)</td>
<td>Kruskall</td>
<td>69</td>
<td>3.7</td>
<td>.157</td>
</tr>
<tr>
<td>Parent Qualifications (Post 16/ No post 16)</td>
<td>Wallis</td>
<td>67</td>
<td>367.5</td>
<td>.298</td>
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<tr>
<td>Parent ethnicity (White/ Non-White)</td>
<td>Mann Whitney U</td>
<td>68</td>
<td>548.5</td>
<td>.465</td>
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<tr>
<td>MMR Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>63</td>
<td>374.0</td>
<td>.637</td>
</tr>
<tr>
<td>Genetics Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>63</td>
<td>490.0</td>
<td>.072</td>
</tr>
<tr>
<td>Pregnancy /Birth Belief (Yes/No)</td>
<td>Mann Whitney U</td>
<td>63</td>
<td>474.5</td>
<td>.065</td>
</tr>
<tr>
<td>Therapist Fidelity</td>
<td>Kendall’s tau</td>
<td>70</td>
<td>-.237</td>
<td>.007**</td>
</tr>
</tbody>
</table>

Asymptotic 2 tail sig *p<0.05  **p<0.01

PPCS variables and alliance:

Parents: Differences in means were in a consistent direction, with the high parent-rated alliance group scoring higher on all individual and composite PPCS variables than the low parent-rated alliance group, as predicted (see table 21). For all themes, and for the composite variables, parents rated the alliance higher (lower score) both when the parent was independently more highly rated for expressing their perspective in the session and when the therapist was more highly rated for integrating the parent’s perspective into the session. However the differences were small and Mann-Whitney U tests conducted on the data showed this trend to be non-significant for all variables.

Therapists: Correlations between therapist-rated alliance and PPCS variables are reported in table 22. Therapist-rated alliance was found to correlate significantly with individual PPCS variables for Interpretation of the Child (IOC) and Parent Actions and Strategies (PAS). For these themes therapists rated the alliance more highly when parents were independently more
Table 21  Comparison of PPCS variables in high and low parent-rated alliance groups

<table>
<thead>
<tr>
<th>PPCS Variable</th>
<th>Alliance Group</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>Difference in Means</th>
<th>Mann Whitney U (18)</th>
<th>Sig*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Low</td>
<td>19.88</td>
<td>4.29</td>
<td>1.36</td>
<td>-1.61</td>
<td>62.5</td>
<td>.353</td>
</tr>
<tr>
<td>Exp-IOC</td>
<td>High</td>
<td>21.49</td>
<td>4.61</td>
<td>1.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Low</td>
<td>18.30</td>
<td>4.93</td>
<td>1.56</td>
<td>-1.94</td>
<td>51.0</td>
<td>1.000</td>
</tr>
<tr>
<td>Exp-PAS</td>
<td>High</td>
<td>20.24</td>
<td>4.51</td>
<td>1.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Low</td>
<td>5.48</td>
<td>3.53</td>
<td>1.12</td>
<td>-0.60</td>
<td>56.0</td>
<td>.684</td>
</tr>
<tr>
<td>Exp-PSD</td>
<td>High</td>
<td>6.08</td>
<td>1.54</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Low</td>
<td>13.56</td>
<td>3.00</td>
<td>0.95</td>
<td>-0.95</td>
<td>61.5</td>
<td>.393</td>
</tr>
<tr>
<td>Int-IOC</td>
<td>High</td>
<td>14.51</td>
<td>3.55</td>
<td>1.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Low</td>
<td>13.66</td>
<td>3.29</td>
<td>1.04</td>
<td>-0.36</td>
<td>66.5</td>
<td>.218</td>
</tr>
<tr>
<td>Int-PAS</td>
<td>High</td>
<td>14.02</td>
<td>3.07</td>
<td>0.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Low</td>
<td>3.28</td>
<td>2.47</td>
<td>0.78</td>
<td>-0.26</td>
<td>58.0</td>
<td>.579</td>
</tr>
<tr>
<td>Int-PSD</td>
<td>High</td>
<td>3.54</td>
<td>0.53</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∑-Exp</td>
<td>Low</td>
<td>43.67</td>
<td>10.46</td>
<td>3.31</td>
<td>-4.15</td>
<td>64.5</td>
<td>.280</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>47.81</td>
<td>9.15</td>
<td>2.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∑-Int</td>
<td>Low</td>
<td>30.49</td>
<td>7.24</td>
<td>2.29</td>
<td>-1.58</td>
<td>59.0</td>
<td>.529</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>32.07</td>
<td>6.28</td>
<td>1.99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Exact Sig 2-tail

highly rated as expressing their perspective, and when therapists were independently more highly rated as integrating the parent’s perspective into the session. For the theme of Parental Self Disclosures (PSD) no relationship between therapist-rated alliance and either Expression or Integration of perspective was found. The two composite scores, Combined Expression (∑ Exp) and Combined Integration (∑ Int), both correlated significantly with therapist-rated alliance (∑ Exp, r= -.628 p< 0.01; ∑ Int, r= -.720 p<0.01). However many of the PPCS variables themselves were highly inter-correlated. Between themes, the variables for Interpretation of Child (IOC) and Parent Actions and Strategies (PAS) correlated with each other, but those for Parent Self Disclosures (PSD) did not, suggesting that this is a more independent variable. Within themes, the Integration and Expression variables, including those for Parent Self Disclosures (PSD), show high levels of correlation, as do the composite integration and expression variables ∑ Exp and ∑ Int.

Table 22. Correlation matrix: therapist-rated alliance and PPCS variables

<table>
<thead>
<tr>
<th>Mean therapist rated alliance</th>
<th>Mean Exp-IOC</th>
<th>Mean Exp-PAS</th>
<th>Mean Exp-PSD</th>
<th>Mean Int-IOC</th>
<th>Mean Int-PAS</th>
<th>Mean Int-PSD</th>
<th>∑ Exp</th>
<th>∑ Int</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean therapist rated alliance</td>
<td>1.000</td>
<td>-.637**</td>
<td>-.538**</td>
<td>-.127</td>
<td>-.674**</td>
<td>-.669**</td>
<td>-.281</td>
<td>-.628**</td>
</tr>
<tr>
<td>Mean Exp-IOC</td>
<td>1.000</td>
<td>.704**</td>
<td>.282</td>
<td>.910**</td>
<td>.795**</td>
<td>.438</td>
<td>.919**</td>
<td>.932**</td>
</tr>
<tr>
<td>Mean Exp-PAS</td>
<td>1.000</td>
<td>.406</td>
<td>.647**</td>
<td>.841**</td>
<td>.843*</td>
<td>.875**</td>
<td>.780**</td>
<td></td>
</tr>
<tr>
<td>Mean Exp-PSD</td>
<td>1.000</td>
<td>.065</td>
<td>.260</td>
<td>.922*</td>
<td>.547*</td>
<td>.347</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Int-IOC</td>
<td>1.000</td>
<td>.796**</td>
<td>.278</td>
<td>.794**</td>
<td>.792**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Int-PAS</td>
<td>1.000</td>
<td>.420</td>
<td>.843**</td>
<td>.909**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Int-PSD</td>
<td>1.000</td>
<td>.660**</td>
<td>.545*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∑ Exp</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∑ Int</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Step 2: Multivariate analysis**

Regression analyses were carried out with the full PACT sample of 77 cases for parent-rated alliance (since no PPCS variables were to be included) and with the smaller PPCS sub-sample of 20 cases for therapist-rated alliance. Separate models were developed for parent-rated and therapist-rated alliance.

**Parent:** With parent-rated alliance as the dependent variable, the two baseline variables that had shown associations, MMR Belief and Post-16 Qualifications were entered as independent variables in a single step. Bootstrapping (1000 samples) was selected to account for the non-parametric distribution of parent-rated alliance. For both variables standardised betas were significant, with MMR Belief ($\beta = .325, p<0.05$) contributing slightly more than Post-16 Qualifications ($\beta = .295, p<0.05$) to the variance in the model. The variance inflation factor (VIF) and tolerance statistics indicated no issues with collinearity, confirming the independence of the two variables. The final model, including both variables, accounts for 18.3% of variance in parent-rated alliance in the sample; the addition of the variables to the model significantly improves its predictions $p<0.01$ (table 23)

Table 23 Multiple Regression: Parent-Rated Alliance

<table>
<thead>
<tr>
<th>Unstandardised Coefficients</th>
<th>Bootstrap Confidence</th>
<th>Standardised Coefficients</th>
<th>95% Bootstrap Confidence</th>
<th>Collinearity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Bias</td>
<td>SE B</td>
<td>$\beta$</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>25.696</td>
<td>0.013</td>
<td>1.226</td>
<td>23.295</td>
</tr>
<tr>
<td>Post 16 Qual</td>
<td>4.568</td>
<td>-0.061</td>
<td>1.678</td>
<td>.295*</td>
</tr>
<tr>
<td>MMR Belief</td>
<td>5.113</td>
<td>0.071</td>
<td>1.940</td>
<td>.325*</td>
</tr>
<tr>
<td><strong>R2 = .183</strong></td>
<td></td>
<td></td>
<td></td>
<td>*p&lt;0.05</td>
</tr>
</tbody>
</table>

**Therapist:** With therapist-rated alliance as the dependent variable, therapist fidelity to the model was entered as an independent variable in the first step, as this had previously been reported as a variable in the literature. The combined expression variable ($\Sigma$-Exp) was entered in the second step and the combined integration variable ($\Sigma$-Int) was entered in the third step. Entering therapist fidelity on its own in step 1 gave a standardised $\beta$ of -.517, significant at $p<0.05$. When $\Sigma$-Exp was added in step 2 ($\beta = -.456, p<0.05$) the model significantly improved overall, ($\Delta R^2 = .189, p<0.05$) but the contribution of therapist fidelity fell to just below significance ($\beta = .358, sig .058$). Adding in $\Sigma$-Int in the third and final step (standardised $\beta = -.941, p<0.05$) further improved the predictive power of the model ($\Delta R^2 = .131, p<0.05$). The contribution of therapist fidelity was significant in this final model ($\beta = -.378, p<0.05$) but the contribution of $\Sigma$-Exp was not. VIF and tolerance statistics confirm collinearity problems.
with $\sum_{-}$Exp and $\sum_{-}$Int. The final model explains 58.8\% of the variance in therapist-rated alliance (table 24).

Table 24  Multiple Regression: Therapist-rated alliance

<table>
<thead>
<tr>
<th>Step</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>95% Confidence Intervals</th>
<th>Collinearity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>$\beta$</td>
<td>Lower</td>
</tr>
<tr>
<td>Step 1</td>
<td>Constant</td>
<td>153.74</td>
<td>45.76</td>
<td>57.611</td>
</tr>
<tr>
<td></td>
<td>Therapist Fidelity</td>
<td>-9.115</td>
<td>3.557</td>
<td>-16.588</td>
</tr>
<tr>
<td>Step 2</td>
<td>Constant</td>
<td>146.977</td>
<td>40.646</td>
<td>61.222</td>
</tr>
<tr>
<td></td>
<td>Therapist Fidelity</td>
<td>-6.709</td>
<td>3.304</td>
<td>-13.679</td>
</tr>
<tr>
<td></td>
<td>Combined Expression</td>
<td>-0.528</td>
<td>.217</td>
<td>-.517*</td>
</tr>
<tr>
<td>Step 3</td>
<td>Constant</td>
<td>150.736</td>
<td>36.531</td>
<td>73.293</td>
</tr>
<tr>
<td></td>
<td>Therapist Fidelity</td>
<td>-6.667</td>
<td>2.966</td>
<td>-12.955</td>
</tr>
<tr>
<td></td>
<td>Combined Expression</td>
<td>0.477</td>
<td>.486</td>
<td>.412</td>
</tr>
<tr>
<td></td>
<td>Combined Integration</td>
<td>-1.607</td>
<td>.713</td>
<td>-3.118</td>
</tr>
</tbody>
</table>

Step 1 $R^2 = .267$; Step 2 $R^2 = .457$, $\Delta R^2 = .189$, $p<0.05$; Step 3 $R^2 = .588$, $\Delta R^2 = .131$, $p<0.05$; *$p<0.05$

Discussion

Two main predictions were under investigation; firstly that Parent-therapist dialogue that contains greater parental expression of underlying perspectives will be associated with higher therapeutic alliance as rated by a) parents and b) therapists and secondly that Parent-therapist dialogue that contains greater therapist integration of expressed parental perspectives will be associated with higher therapeutic alliance, as rated by a) parents and b) therapists.

**Parent-rated alliance:** For parent-rated alliance there was a trend in the data in line with the predictions, that is, parents rated the alliance higher when they were judged to be expressing their perspectives in detail, and when the therapists were judged to be integrating those perspectives well into the session. However mean differences between high and low parent-rated alliance groups were small and this trend was not statistically significant. Despite the non-significance of the result, the fact that sessions from the higher alliance group were consistently independently blind rated as scoring higher on all the PPCS expression and integration variables is of some interest in a small sample (20 cases). It opens the possibility that these variables may yet be an influential factor in alliance formation, but that the effect is too small to detect in the current sample. A larger sample size, which was beyond the resources of this exploratory study, or a sample with a wider variation in alliance scores, would be needed to investigate this proposition further.

Of the baseline factors investigated for incorporation into a regression model of parent-rated alliance two showed significant associations. Alliance in the PACT intervention was more
highly rated by parents who had no post-16 qualifications, with the association strongest for
the Belief in Treatment component of the alliance. A number of reasons could be posited for
this result. It may be that less educationally qualified parents place greater trust in their
therapists, as experts, to be providing the right treatment for their child, thereby increasing
alliance. They may also be particularly appreciative of the model of the PACT parent training
intervention, which specifically seeks to empower them in their discussions with the therapist
and value their perspectives.

Parents in the PACT trial who cited MMR as a possible cause of autism in their child rated the
alliance lower than parents who did not mention MMR. This negative association is
interesting. The analysis by components of alliance showed that the association was not driven
solely by either the ‘Belief in Therapist’ or the ‘Belief in Treatment’ components, since neither
was significant on their own, suggesting that a combination of both is involved. The
suggestion of a link between autism and MMR in 1998 resulted in huge public concern in the
UK (Burgess, Burgess et al. 2006). The MMR issue may have had the effect of reducing
parent’s trust in medical profession (Smith, Yarwood et al. 2007) and perhaps therefore their
belief in the therapist’s ability to help their child. The PACT treatment is a psychosocial
intervention, and it may be that vaccine beliefs lead parents to favour a more biomedical
treatment approach; Al Anbar, Dardennes et al. (2010) looking at treatments favoured by
parents with different causal beliefs, found that the use of metabolic treatments, in particular
special diets and vitamin supplements was associated with parental external attributions of
cause, such as vaccines. Additionally in terms of alliance formation most parents will have
been aware that the research linking autism with MMR had been discredited and that their
therapists were unlikely to share their belief; this may have introduced a barrier in the
development of their relationship.

Overall the multiple regression model for parent-rated alliance, based on a sample of 77 cases,
found that the two unrelated factors, Belief in MMR (Yes/No) and Post-16 Qualifications
(Yes/No) together accounted for 18.3% of the variation in parent-rated alliance. Given the
complexity of alliance as a construct this is a noteworthy proportion. However there remains a
significant amount of the variation in the alliance that has not been accounted for by the
factors investigated in this study. Clinically the factors found to be of significance are ones
that it is difficult for the therapist to influence; though open discussion about MMR belief may
help (Hatcher and Barends 2006)
**Therapist-rated alliance:** The results indicate that the predictions were confirmed for therapist-rated alliance; therapists rated the alliance higher when parents were judged to be expressing their perspectives in detail and when the therapists themselves were judged to be integrating parents’ perspectives well into the session. The composite Expression and Integration variables both correlated highly with therapist-rated alliance, with correlation coefficients of -.628 and -.720 respectively (low alliance score = high alliance hence the negative correlation). The effect of this expression and integration of parental perspective was thus much stronger for therapists than it was for parents, for whom as discussed above, other factors must have been more influential. In terms of the separate themes, the association with therapist-rated alliance was found for dialogue on Interpretation of the Child (IOC) and on Parent Actions and Strategies (PAS) but not for Parent Self Disclosures (PSD). The fact that the association with alliance did not hold true for parent self-disclosures is of interest. One possibility here is that, since there were fewer parent self-disclosures in the sessions than dialogue on interpretations of the child and parent actions and strategies, there were simply not enough examples in the sample for patterns to be detected. Again a larger and more varied sample might show a different result. Alternatively this finding might be in keeping with observations that speech and language therapists are generally more comfortable dealing with the technical aspects of therapy, i.e. the presentation of the child and the strategies of treatment, than the more emotional and personal disclosures that parents may make about their own feelings and beliefs (Hanna and Rodger 2002, Brady, Peters et al. 2003). Although some therapists go on to develop counselling skills they are not a major part of paediatric speech and language therapist training, where the primary focus is on diagnosis and child focused intervention. Therapists may themselves have felt less confident and competent in their ability to integrate personal disclosures effectively, even when they are rated positively by independent raters for doing so. Thus higher scores on PSD expression and integration may not always have had the effect of increasing the therapist’s view of the alliance.

The only other variable found to associate with therapist-rated alliance in this study was therapist fidelity to the intervention model. The literature on therapist fidelity and alliance has mixed findings; most studies report for parent-rated alliance and find no association, as was the case here e.g. (Ogrodniczuk 1998, Hukkelberg and Ogden 2013). Brauhardt, de Zwaan et al. (2014) did find a positive association with observer-rated therapeutic alliance and therapist adherence in a cognitive behavioural therapy intervention. It could be argued that in this setting therapist fidelity was to an extent measuring the same thing as alliance; part of fidelity to the PACT treatment involves the therapist making efforts to elicit and value parental
observations. There may also have been an effect of the research nature of the trial; even if therapists felt alliance was low they were not at liberty to make changes to the intervention. It is plausible that fidelity may have slipped under such circumstances.

When combined in a multiple regression model the three factors, therapist fidelity, Combined Expression and Combined Integration accounted for a substantial 58.8% of the variation in therapist-rated alliance. The effects of Expression and Integration were inter-related, since the two were correlated, making interpretation more difficult but in the final model integration had the more significant contribution of the two. Thus the therapist rated the alliance higher if she was maintaining fidelity to the intervention protocol, if the parent was expressing her perspective and/or more importantly if she was able to integrate the parent’s expressed perspective into the work of the therapy session.

**Limitations:** In interpreting the results it needs to be borne in mind that alliance in the trial was very much on the high side for both groups; even those in the low alliance group had relatively high quality alliance. This is a common occurrence in research trials where therapists are highly trained and supervised, and parents have opted in (Green 2006, Tryon, Blackwell et al. 2008). The relatively small effects that tend to be found in alliance research might be better detected in larger samples with a wider range of alliance scores. Similarly the PPCS scores for the Expression and Integration variables were highly inter-related in this sample, suggesting that when the parent was expressing her perspective in detail the therapist was also usually integrating that perspective well into the session. Again this may be an artefact of the therapists all being highly experienced and trained in an intervention that emphasised the elicitiation and incorporation of parent perspective. A wider range of experience in the therapists may have produced a more varied sample for analysis i.e. it may have included more examples where expression was high but integration low and vice versa.

The study was exploratory in nature, reflected in the sample sizes, and caution therefore needs to be taken in interpreting the results of the regression analyses, which must be considered preliminary. For the parent-rated model, since no process PPCS variables were eventually incorporated, the regression is based on a sample size of 77 cases and 2 predictors. According to graphs produced by Miles and Shevlin (2001), as reproduced in Field (2009), this would be adequate to detect a medium effect, in line with what was found here. The parent-rated regression can therefore likely be considered reasonably reliable. The therapist-rated model however, with 2 to 3 predictors and 20 cases is underpowered; according to the same graphs this would not be enough to reliably detect even a large effect and thus, despite the large
individual contributions and high proportion of variance explained by the predictors in the model, the results must be treated as exploratory.

**Conclusion**

Establishment of a good quality of alliance with parents in parent-mediated interventions has previously been shown to be important to treatment continuation and outcome. Parents and therapists tend to rate alliance differently; clinically therapists should be aware of the possibility that the parent views of the alliance are not always aligned with their own and may be influenced by different factors. For parents specific causal beliefs may be important, especially where beliefs are either inconsistent with the treatment on offer or are unlikely to be shared by the therapist. Open and non-judgemental discussion of causal beliefs may help.

Interventions like PACT, where the style of therapy delivery specifically aims to empower parents and value their contributions may be particularly effective in producing high quality alliance in parents with lower levels of qualifications. However, whilst there is evidence here for a strong association between parental expression of perspective and therapist-rated alliance, there is only a non-significant trend with parent-rated alliance. This is not to say that parents don’t value the opportunity to express their perspective but that other factors, yet to be clearly identified, may be of more importance to their rating of alliance.
CHAPTER 4

DISCUSSION
Introduction

The discussion sections of the three results papers have considered the specific findings related to the individual focus of each. The aims of this overarching discussion chapter are:

1) To present a more comprehensive and integrated overview of the results, expanding on the detail where appropriate, and including discussion of findings not covered in the three papers.
2) To consider the implications of these findings overall for current knowledge about the quality of alliance with parents, in the context of a parent-mediated intervention.
3) To discuss strengths and limitations of the research.
4) To suggest clinical implications of the research and suggest directions for future research.

Section 4.1 focuses on the findings related to the nature and course of parent-therapist alliance, as detailed in the descriptive analyses of alliance section of the Results Chapter (Section 3.5). It considers some of the similarities and differences between alliance with parents, as indirect clients, and alliance with direct adult clients. It also comments on the implications of the findings for current discussions about how alliance might manifest in different types of therapy. Section 4.2 expands on the findings related to the beliefs and perspectives held by parents, examining them in more depth. Section 4.3 discusses the relationship between parents’ beliefs and perspectives and parent-therapist alliance as found in this research. Section 4.4 summarises the findings for other baseline and process factors and discusses the relative contribution of these and the parent belief and perspectives variables to multivariate models of alliance. This section also considers the potential role that factors not included in this research may have in the establishment of a good quality alliance. Section 4.5 critically examines the methodology, highlighting strengths and weaknesses of the design and the methods employed in this research. Section 4.6 discusses clinical implications and Section 4.7 proposes directions for future research.
4.1 The nature and course of therapeutic alliance.

In the introduction to this thesis it was noted that, in comparison with the research on direct adult and child/youth clients, there is a distinct paucity of information on alliance with parents. The results of the descriptive and factors analyses of the alliance data, reported in Section 3.5 and discussed below, extend the little that is currently known by reporting in some detail the nature and course of alliance with parents, as found in a parent-mediated intervention.

4.1.1 Descriptions of parent-therapist alliance

Quality of alliance: Quality of parent and therapist-rated alliance at all three time points was relatively high. This finding of high alliance ratings is a common occurrence in research trials where therapists tend to be highly trained and motivated (Green 2006) and parents have opted in to the intervention. Kazdin, Whitley et al. (2006) similarly report high parent and therapist-rated alliances using the full version of the WAI. Tryon, Blackwell et al. (2008) investigated the way in which alliance scales had been used in 63 published studies and reported a tendency for clients to use only the highest 20% of possible ratings and therapists the highest 30%. They suggested that whilst this may of course be an accurate reflection of the alliance, other factors may be involved, such as the client answering as they think they should. The PACT trial attempted to minimise these effects by sending questionnaires to and from offices independent of the therapists’ bases. A slightly wider range of scores than in Tryon’s study was used here; however it has to be acknowledged that the lack of spread of alliance scores in the samples is not ideal and will have made it more difficult to detect any effects that may exist.

Agreement between parent and therapist ratings of alliance: Parents and therapists rated the alliance differently. Parent-rated and therapist-rated alliance scores in this sample did not correlate overall. Whilst this finding concurs with Bachelor (2013), it differs from Kazdin, Whitley et al. (2006) who reported small but significant correlations between therapist and parent alliance scores at two time points (early and late in treatment) in a parent training programme for children with oppositional, aggressive and anti-social behaviours. Given that the parent and therapist PACT alliance questionnaires do not contain all the same items, and as such are not an exact mirror of each other, it could be argued that they are not measuring the exact same construct and that differences in ratings are perhaps inevitable. This is an issue that has recently been highlighted by Accurso and Garland (2015). They adapted a commonly
used child alliance measure, the TASC-r (Shirk and Saiz 1992) to create a mirror version for caregivers, the TASC-P (Accurso, Hawley et al. 2013). Using this in a study of child-caregiver-therapist alliance they found a moderate level of agreement between caregivers and therapists. Despite this they also found that different baseline factors associated with therapist-rated and caregiver-rated alliance, indicating that it remains of value to investigate alliance separately for parents/caregivers and therapists.

In fact there was some variation in the levels of agreement in the PACT sample, depending on the time point when alliance was measured. At the 3 month time point parent and therapist alliance scores did not correlate, indicating that each party experienced the alliance differently at this early stage. At 6 months there was a small but significant association, suggesting a coming together of views at this point. This coincided with the end of the intensive (fortnightly sessions) phase of treatment. At 9 months, during the less intensive, monthly booster sessions phase of the intervention, scores once again did not correlate. One interpretation of this finding is that it takes some time for parents and therapists to reach a point in their collaborative relationship whereby they both experience the alliance (be it high or low) similarly; but that this understanding can then be lost when frequency of sessions is diminished.

Overall, in light of conflicting evidence it would be recommended that researchers interested in parent-therapist alliance separately assess and investigate alliance from parent and therapist perspectives, as was done in this study.

**Stability of alliance ratings:** Alliance was generally stable across treatment. Alliance scores across time points did not significantly differ for either parent or for therapist ratings. This finding is in line with previous reports that client’s views of the alliance tend to be established early and remain relatively consistent over the course of therapy (Hersoug, Hoglend et al. 2010), and that the time point at which alliance is measured i.e. early, mid or late in treatment does not moderate the association with outcome (Martin, Garske et al. 2000, Kazdin, Whitley et al. 2006). This is not to say that the alliance in all cases remains completely static and stable with no variation across treatment. There has been interesting research in psychiatry looking at patterns in the development of alliance over time, with u-shaped, v-shaped and saw-tooth patterns being described (Kramer, Roten et al. 2008, Weiss, Kivity et al. 2014), and there is evidence that the alliance is being constantly negotiated in a series of ruptures and repairs (Safran and Muran 2006). It would be of interest for future research to look in more detail at the patterns of alliance development with parents; for the purposes of this research however
the relative stability of alliance across the intervention justified the use of mean scores, thereby increasing the sample size available.

**Therapist differences in alliance ratings:** Parent-rated alliance scores did not differ depending on the therapist. In this sample no significant between-therapist differences were found in the parent ratings of alliance i.e. therapists were, on average, equally good at forming alliances as rated by parents. This is in contrast to other studies which have reported differences in parents’ average ratings of alliance for different therapists (Baldwin, Wampold et al. 2007). All the PACT intervention therapists were highly trained, closely supervised and aware of the potential importance of the alliance. There is evidence from psychiatry that therapists can improve the quality of alliance following specific training and feedback (Crits-Christoph, Connolly Gibbons et al. 2006, Hilsenroth and Cromer 2007, Smith-Hansen, Constantino et al. 2011); this may have had the effect of limiting differences that might be more apparent in a non-research setting. Interestingly there was a between-therapists difference in therapist ratings of alliance. A significant difference in therapist-rated alliance was found between the therapist who, on average, rated the alliance highest and the therapist who rated it lowest. It has been observed that less experienced therapists tend to rate the alliance lower than more experienced therapists (Hersoug, Hoglend et al. 2001); this could be an explanation in this study, though other factors may also be involved.

### 4.1.2 Factor structure of the alliance questionnaires

**Reflections on the Alliance Questionnaires:** Exploration of the individual items in the PACT alliance questionnaires in preparation for the factor analysis provide a cautionary tale about combining questions from different measures, and using measures in part. The majority of the items in the PACT alliance questionnaires were adapted for parents from the WAI, with 5 additional items taken from FEQ. The FEQ was developed for use with parents in an inpatient/outpatient psychiatry setting; it was thought that the inclusion of some items from this would capture some of the unique aspects of parent alliance that might not have been captured in the WAI, which was developed for use with direct adult clients. However on examination some of the FEQ items did not sit well with the WAI items and were among those that were omitted from the final factor analyses for lack of correlation with other items. Additionally the fact that some of the original WAI items were already excluded from the PACT alliance questionnaires (to keep them of manageable length) makes it difficult to compare results across other studies. In more recent years revised short forms of the WAI have been developed, factor analysed and extensively used in research; these have retained
some different items to those retained in the PACT alliance questionnaires. The short revised form of the WAI (Hatcher and Gillaspy 2006), published after the PACT trial began, with adaptations in wording for parent clients rather than direct adult clients, would be worth considering for further alliance research with parent groups. The TASC-P has also recently been developed specifically for parents (Accurso, Hawley et al. 2013). This is a parent version of what was originally an alliance questionnaire designed for child clients and was specifically created to be a mirror version of the child questionnaire. As such it could be argued that some of the items are not subtle enough to really tap into the alliance construct with an adult.

Factor Structure of the Parent Alliance Questionnaire: Principal components analyses of the PACT parent alliance questionnaire resulted in a 2 factor solution for parent-rated alliance (Belief in Therapist; Belief in Treatment). The Belief in Therapist component includes items pertaining to the emotional relationship, i.e. liking, trust, respect, but also includes items related to the parent’s perception of the therapist as someone who is genuinely interested in the welfare of their child, who has the capability to help their child and who uses the session time efficiently. These items are subtly different and wider ranging than the traditional bond component; arguably they reflect the indirect nature of the therapy relationship in this context. The parent is not only influenced by how the therapist relates directly to them but also their perceptions of the therapist in relation to their child and their confidence that the therapist has a good understanding of their child and the ability to help them. The Belief in Treatment factor includes items which might be considered either goal or task in a traditional 3 factor solution. Items are those that relate to the parent’s perception that the treatment is right for their child, and targets child outcomes that the parent herself sees as important. It also includes items related to the parent’s perception of how helpful the treatment is to her as a parent. The existence of this Belief in Treatment factor of alliance here adds weight to the current interest in targeting client nominated outcomes in interventions.

Factor Structure of the Therapist Alliance Questionnaire: For therapist-rated alliance either a three factor (Right Treatment; Bond; Parent Engagement) or single factor solution fit the data best. For the analyses the single factor solution was used here, as the three factors were highly correlated. It is of interest however to explore the three factor solution further since the factors found differed in nature from the usual goal, task, bond distinction. There was a clear bond factor encompassing items related to the emotional relationship, such as liking, respect and the extent to which therapist’s felt the parents confided in them. However the other two factors were better described as Right Treatment, i.e. the extent to which the
therapist believed that the treatment was the right one for the child, taking into account her perceptions of the parent’s goals, understanding and overall commitment to the treatment, and Client Engagement, representing the therapist’s impression of the parent’s level of engagement with treatment within actual intervention sessions. The context of a research trial is of interest here, since therapists were not at liberty to change the intervention even if they were not completely convinced that it was the best approach for the parent or the child. Thus the Right Treatment factor may exert more influence on the overall alliance in research trials than in clinical practice.

**Implications of the factor analysis for alliance theory:** It should be borne in mind, when considering the components reported here, that principal components analysis (PCA) as a statistical technique does not allow inference beyond the sample of the study; the components would need to be replicated in further (and ideally larger) samples of parent-therapist alliance data to give confidence in the structure. However, the finding that a traditional 3 factor goal, task, bond solution did not best fit either the parent or therapist-rated data adds to the literature, discussed in the introduction to this thesis, proposing that the underlying components of alliance may differ depending on client group and intervention. It provides some evidence to back up the view that the factors and processes that lead to increased alliance, and the manner in which they then interact with outcome, should be explored for individual treatments and client groups (Hatcher and Barends 2006, Horvath 2006, Ulvenes, Berggraf et al. 2012).

In this research the two parent components, Belief in Treatment and Belief in Therapist were inter-related and only one of the univariate analyses conducted resulted in significant associations for one component but not the other. Parent-rated alliance and parent post-16 qualifications were significantly associated for Total Alliance and for the Belief in Treatment component, but not for the Belief in Therapist component. Correlation coefficients were stronger for one component than the other in some of the other analyses but this did not affect the significance or otherwise of the associations. As such disassembling the alliance into component parts has yielded some additional information beyond that obtained from analyses with the total alliance score in this case, i.e. that the association between parent post-16 qualifications and total parent-rated alliance is due to an association with the Belief in Treatment component independent of the Belief in Therapist component. This finding gives some weight to the arguments advanced by Andrusyna, Tang et al. (2001) that alliance research should measure and analyse underlying alliance components separately.
4.1.3 Summary

In summary, the nature and course of alliance with parents in the PACT parent-mediated intervention shows similarities with alliance with other client groups in terms of the relationship between parent and therapist ratings and the stability of alliance over time. Underlying components for parent rated alliance however differ in subtle ways from those proposed with direct clients, reflecting the parents’ role as a mediating client for their child.

4.2 Beliefs and perspectives of parents of children with autism

The research questions for this thesis were developed from a review of the literature on parents’ beliefs and experiences of intervention. Evidence suggested that parents’ prior causal beliefs might be a baseline factor influencing the quality of alliance in parent-mediated intervention, whilst the extent to which parents’ perspectives were discussed in intervention sessions might be a process factor. In the course of the research parents’ beliefs and perspectives have been examined in some detail, both confirming findings of previous studies and providing new insights.

4.2.1 Parents’ causal beliefs:

Beliefs held: Most parents of children with autism cited multiple causal beliefs. The thematic analysis exposed a wide range of causal beliefs; 26 individual causal belief codes were generated. The eight categories into which these were then merged for the purposes of analysis with alliance and demographic factors were broadly similar to those used in checklists and previously described in the literature. However, the specific examples given provided an interesting insight into the wide variety of causal beliefs that parents hold. Alongside more widespread beliefs such as genetics and vaccines, parents cited causes as wide ranging as child falls, frequent house moves, and supernatural beliefs including destiny and re-incarnation. The fact that many parents gave more than one possible cause, or no cause at all, reflects both the ongoing uncertainty about the causes of autism in the community and, in the case of those for whom genetics was considered possible, an increasing interest in epigenetic explanations.

Causal beliefs and demographic factors: Causal beliefs tended not to be predicted by demographic factors. This research did find an association between genetic beliefs and family income, with more affluent families less likely to cite genetic causes, and an association between ethnicity and pregnancy/birth related causes, with white mothers more likely than
non-white to hold a belief related to complications of pregnancy and birth. However, other than these, beliefs about causes did not significantly vary depending on the demographic factors of post 16 educational qualifications, family income levels, ethnicity, and intervention centre. In interpreting both the significant and non-significant associations it has to be borne in mind that sample sizes for individual beliefs were small. The lack of associations with parental ethnicity is perhaps surprising in light of some studies with specific cultural groups which report, for example, more self-blame and more non-biomedical causes than western studies (Mirza, Tareen et al. 2009, Shyu, Tsai et al. 2010). The crude split of white/non-white, the relatively small and heterogeneous sample of non-white and the small numbers citing some of the belief categories, may have limited the possibility of uncovering any trends. Studies with greater numbers of participants from more clearly defined ethnic groups may uncover cultural trends favouring some explanations over others; qualitative analyses of open responses may provide rich descriptions. The finding that the presence or absence of post-16 qualifications in this sample did not significantly associate with any of the types of causal belief held suggests that, regardless of their levels of education, parents endorse a wide range of possible causes. Parents who are perhaps better equipped educationally to evaluate evidence on causes did not, in this sample, differ in the range of causes they subscribed to from those without such resources. Although some demographic trends may be found, the message from this research is that causal beliefs tend to be individually held.

4.2.2 Parents’ perspectives in intervention sessions

This research used qualitative methods to investigate the main themes on which parents expressed their perspective on a range of issues within intervention sessions. As far as the author is aware this is the first time parental perspectives have been investigated in this way.

The aim of the analysis was pragmatic, to produce broad categories that could be used as items in the coding scheme, but the detail uncovered in this process, and presented in Section 3.3 provided interesting insights into parents’ perspectives on their child, on therapy strategies and on the wide ranging effects of having a child with autism on themselves. All parents gave interpretations of their child’s behaviour, communication and motivation and most expressed opinions on the strategies and assumptions of the parent-mediated intervention they were undertaking. The extent of self-disclosures varied most between parents; these included disclosures about emotions, stress, and underlying beliefs about learning and communication.
Corroborating parent themes: Parents made similar disclosures naturalistically within sessions to those expressed in interview situations. Codes and themes that resonate with the findings of previous qualitative studies based on interview and questionnaires were apparent in the parent-therapist intervention session dialogue. Parents disclosed feelings of stress, fatigue and of a sense of overwhelming responsibility for their child’s development, similar to those described in, for example Quintero and McIntyre (2010), Mackintosh, Goin-Kochel et al. (2012) and Giallo, Wood et al. (2013). Conflict between promoting play and learning was another emerging theme in the data, with parents talking about a need to prioritise learning of colours and numbers in readiness for school over play and communication, and to feel that they were contributing to the child's learning. Differing views about the role and value of play were similarly uncovered in Marshall, Goldbart et al. (2007).

Novel parent themes: Parents also expressed perspectives on themes not previously widely reported in the literature. Additional insights, related to the context of intervention arose. A number of parents talked about feeling rejected by their child, or that their child was not interested in them; conversely they expressed joy and enthusiasm when the child did interact well with them. The idea of boredom, i.e. that the repetitiveness of their child’s play or conversation could leave the parent feeling bored with the interaction and their role in it, was another newer theme in the data. A more in-depth analysis of parental disclosures of this kind could lead to a greater understanding of the emotions, pressures and conflicts parents of children with autism face, which would be of value to clinicians in both their relationships with parents and in the design of parent-mediated interventions.

Elicitation of parents’ perspectives in sessions: Parents’ perspectives were mostly elicited by therapists. The quantification of the codes indicated that, in these early sessions at least, parents’ perspectives were for the most part elicited by the therapist, either directly through questions and probes or in response to something they had said, rather than offered spontaneously by the parent. This finding highlights the need for therapists and clinicians to be active in eliciting parent perspectives and creating an environment in which parent feels able to express themselves.

Measuring parents’ perspectives in sessions. The quality of expression and integration of parent perspectives can be reliably measured. This research incorporated the development of a coding scheme, the PPCS, which was largely successful in achieving its purpose of quality rating the expression and integration of parental perspectives as interaction variables for use in
empirical analysis. A critique of the method of devising scheme and its final utility is given in Section 4.5.2 below.

4.3 Parents’ beliefs and perspectives and alliance

This research has extended previous knowledge on the beliefs and perspectives of parents of children with autism by investigating empirically whether these factors relate to the quality of parent-therapist alliance in a parent-mediated intervention. Specifically, parents’ causal beliefs have been investigated as a potential baseline factor, and the quality of the expression and integration of parental perspectives within sessions as a potential process factor.

4.3.1 Causal beliefs and alliance

Parents who cited MMR as a possible cause for their child’s autism significantly rated alliance in the PACT intervention lower than those who did not. For parents undertaking the PACT intervention belief in MMR associated negatively with parent-rated alliance. When included in a regression analysis alongside other variables, belief in MMR remained a significant contributing factor.

As discussed in Paper 1, many of the parents in this study expressed uncertainty about causes, with most of those who mentioned MMR giving it as one of a number of possible causes. Many of these parents will have been aware that mainstream scientific and professional opinion at the time was, and still is, that there is no link between MMR and autism. By 2006 the research on which the claims of a link were originally made had been discredited. This potential misalignment of parent and therapist beliefs may help explain the negative association with alliance. The finding might also be interpreted in the context of work that has shown that treatment preferences and choices in autism can be influenced by causal belief (Cho 2009, Al Anbar, Dardennes et al. 2010). A psychosocial communication intervention such as PACT may be seen as helpful by parents with MMR beliefs, but unlikely to treat what they see as an underlying biomedical cause. In terms of alliance formation, open discussion of MMR as a possible cause may help in improving the quality of the parent-therapist relationship; as Hatcher and Barends (2006) point out it may not be necessary to agree, open negotiation of disagreement can be equally important. Although MMR is the example that comes to light statistically in this sample, it is plausible to suggest that failure to openly discuss
other less professionally conventional beliefs, such as falls, may also result in a lower rating of alliance.

4.3.2 Parents’ perspectives in intervention and alliance

Contrary to the predictions, the research found no association between the PPCS variables measuring the quality of the expression and integration of parental perspectives in session and the quality of parent-rated alliance. PPCS variables were consistently rated higher in the high alliance group than in the lower alliance group, suggesting that the variables may be of some influence, but the difference was not significant. In contrast, the predictions were confirmed for therapist-rated data. Therapists did rate the alliance significantly higher when parents were expressing their perspective in detail and when they were able to integrate these perspectives into the ongoing work of the session. These factors likely give the therapist the sense that the therapy is going well and therefore that the alliance must be good. However the lack of correlation between therapist and parent alliance scores, coupled with this result, suggest that therapists perhaps need to be more aware that other factors might be impacting on the parents’ views of alliance. It is of note that the predictions, although supported by a review of the literature, were proposed by a therapist, based on a view that these factors would be important to parents. It would be useful to find out more directly from parents what factors they feel make a difference to their working relationship with the therapist. Specific qualitative research, for example using interviews, focus groups or consensus techniques, such as that carried out recently by Bedi and Duff (2014), may be informative in deriving future predictions about factors that are important to parents.

4.4 Multivariate models of alliance

4.4.1 Other baseline and process factors

As outlined in the introduction to the thesis, the association between therapeutic alliance and outcome has provoked significant research efforts into examining factors that may contribute to the development of high quality alliances, though little of this research has been done with parents as clients. Alliance is recognised to be a complex construct and an enormous variety of determining factors have been proposed; Karver and Handelsman (2005) for example reported 44 different constructs that had been examined in youth studies alone. This research recognised that any examination of the potential role of parents’ beliefs and perspectives in
alliance formation would need to include other factors previously suggested in the literature in multivariate models.

Given the retrospective nature of the research the other factors examined were determined by the data available from the PACT trial. This comprised demographic data (family income, intervention parent level of education, therapist and parent ethnicity match, intervention centre) and ratings for therapist fidelity to the intervention.

**Parent factors:** Parent’s level of education was found to associate with parent-rated alliance. A third of the parents in the PACT trial had no post-16 qualifications and these parents rated the alliance higher than those with more advanced qualifications. The PACT intervention aims to empower parents by valuing their contributions. It may be that this approach was particularly appreciated by parents with lower levels of education who may be more used to feeling a power imbalance between themselves and professionals. An alternative interpretation, however, would be that these parents put more trust in the therapist to be doing the right thing for their child and consequently rate the alliance higher.

**Therapist factors:** For therapist-rated alliance therapist average fidelity to the intervention was the only factor to reach significance on univariate testing. Therapists who maintained a higher level of fidelity to the intervention protocol rated the alliance higher than therapists who were less adherent. This finding adds to the mixed literature on therapist fidelity and is broadly in line with the findings of Brauhardt, de Zwaan et al. (2014) who reported a similar positive association with observer rated therapeutic alliance and therapist adherence in a cognitive behavioural therapy intervention. As discussed in Paper 3, it is possible that this association can be explained in part by some similarities in the PACT fidelity and alliance measures. The philosophy of the PACT intervention places importance on the relationship between the therapist and the parent, and the fidelity measure for the trial included judgements on this relationship alongside judgements on content, technique and management of sessions. However it is also conceivable that some therapists allowed fidelity to slip because they judged alliance to be low, for whatever reason. There is in fact some evidence to suggest that where alliance is low, better outcomes are achieved when therapists are moderately rather than strictly adherent to manualised intervention (Barber, Gallop et al. 2006).

4.4.2 **Multivariate model of parent-rated alliance**

In total then, two factors were identified as showing univariate association with parent-rated alliance; belief in MMR as a possible cause of autism in the child and parents’ level of
education. These two factors contributed independently to the regression model and between them accounted for 18.3% of the variance in parent-rated alliance. In terms of alliance research this represents a good proportion of variance; however the findings do beg the question – what other factors might account for the remaining 81.7% of variation in parent-rated alliance? The main group of client variables previously reported but not included in this research, as data were not available, were variables related to parent personality, attachment status, and pre-treatment social relations and levels of social support. Variables such as personality and attachment status are believed to have an effect on the relationships people develop – the alliance is essentially a relationship between therapist and parent. Recent research (Farsimadan, Draghi-Lorenz et al. 2007, Petrowski, Nowacki et al. 2011, Taber, Leibert et al. 2011) points to the match between client and therapist being of more importance than the client’s individual characteristics; this would be an interesting area to explore further with parents. Other possible factors can be speculated on from qualitative evidence in the literature. Some parents of children with autism report reduced levels of social support following diagnosis (Altiere and von Kluge 2009), and high levels of maternal stress (Quintero and McIntyre 2010) and fatigue (Giallo, Wood et al. 2013) have also been found. These factors are potentially particularly relevant to alliance with parents in parent-mediated intervention since this style of therapy does have the potential to increase the burden on parents.

4.4.3 Multivariate model of therapist-rated alliance

Three factors in total were found to show univariate association with therapist-rated alliance; therapist average fidelity, quality of parents’ expression of perspectives, quality of therapists’ integration of parents’ perspectives. A substantial 58.8% of variance in therapist-rated alliance was explained when the three factors were combined into a multivariate model, though as discussed in Paper 3, caution must be taken in interpreting these results since the sample size of 20 cases means the regression was underpowered and the model can only be considered exploratory. Since expression and integration of perspectives were highly related in this sample it is difficult to draw conclusions about the relative importance of each to therapist ratings of alliance. However it is clear that therapists’ judgements of alliance in the PACT intervention were strongly related to the quality of parent-therapist dialogue around parents’ perspectives, and the extent to which they remained faithful to the intervention protocol. It seems likely that these factors are particularly influential in the case of a research trial, where therapists
have little autonomy over the intervention they deliver to parents. Different factors may be of relevance in community based treatment as usual.

4.5 Critique of methodology: Strengths and limitations

Some of the strengths and limitations of the research have been highlighted and addressed in context within the above discussions. The section below considers additional issues.

4.5.1 The use of a pre-existing dataset

The method of investigating the research questions using data previously gathered during an intervention trial has both strengths and limitations. The PACT dataset is demographically diverse and both larger and more comprehensive than could ever have been collected independently within the resources of a PhD study. This is a real strength in terms of sample size and generalizability. The use of actual therapy dialogue as opposed to interview or focus group data can also be considered a strength, since the data is more naturalistic. Creswell (2013) notes that in interview settings the researcher’s presence may bias the responses given and information can be influenced by the manner in which the interviewees wish to present themselves. Parents in the PACT trial were habituated to being videoed as this was a routine part of the intervention; they were familiar with the therapist and were expressing themselves as an ongoing part of the therapy, rather than recalling and presenting perspectives in response to an interview question.

Some limitations did arise from the inability to go back to the study participants and either collect more data on additional variables or, in relation to the qualitative analyses, to present the findings of the analysis to a wider group of PACT parents to check for credibility and plausibility. A further limitation, already highlighted, was the lack of spread of alliance scores in the PACT dataset. Arguably this was accentuated by the fact that the data were drawn from a research trial with highly trained therapists and motivated parents. Use of data from a community clinic based sample receiving regular intervention might have provided a wider range of motivation in parents and competence/dedication in therapists, which in turn may have improved the range of alliance scores in the sample. However the spread was sufficient to detect some associations in the data and use of the high/low parent-rated alliance purposive sample was successful in overcoming this limitation.
An additional strength of the research is the attention paid to ensuring that rating of the variables used was both independent and blinded. Alliance was rated directly by parents and therapists, fidelity was rated by independent principal investigators on the research team and demographic data collected by research assistants. Coding of the therapy dialogue on the PPCS was done blind to all other variables i.e. alliance ratings, demographic characteristics (apart from ethnicity in cases where it was apparent from the video) and causal beliefs of the parent, and therapist fidelity ratings. Cases in which the main coder was therapist were excluded from the PPCS coded sample. Unblinding occurred only once all data had been collected and coded. This rigour gives confidence that the results are not biased by common-rater confounds.

4.5.2 Coding parents’ perspectives

The development of a coding scheme to measure the expression and integration of parental perspectives within a session was a major and time-consuming part of the research. The decision to develop a scheme from qualitative analysis of session data was largely forced by the lack of a suitable published coding scheme at the start of the research, and by the limited information available on parental perspectives within intervention on which to base a top-down theoretical scheme. However as a method of devising a scheme it proved to be informative and successful.

Paper 2 discussed the development of the PPCS scheme and the pilot study outcomes. The method chosen, i.e. using qualitative analysis of session data to inform the items and operationalization of the scheme, had many advantages. Since the themes on which the items for the coding scheme were based were inductively derived from real session data they had ecological validity and were easier to directly observe in subsequent videos than may have been the case had a top-down, theoretically driven method been employed. The use of a maximum variation sample in the qualitative analysis, including a range of parents of differing demographic backgrounds, with children of varying levels of autism severity, helped ensure the scheme would be appropriate for the full sample. Illustrating the rating scales with examples based on dialogue from the analysis situated the scheme in real interaction data and was found to be very helpful in training coders.

The main disadvantage of the method was that the initial qualitative analysis was time-consuming, and required transcriptions to be made. However, had a top-down theoretical scheme been possible it is likely that the piloting stage would have been much longer and
required significantly more work to comprehensively define themes and refine descriptors. The employment of the scheme in Paper 3 on a larger sample of data yielded further information on the strengths and weaknesses of the scheme. Preliminary analyses of the PPCS data for Paper 3 showed that the scheme was largely successful in differentiating between sessions and cases. Sessions did vary in their scores on the 6 individual and 2 composite weighted variables, and with the exception of variables for Parent Self Disclosures (PSD) this variation was shown to be normally distributed. Scores for Interpretation of Child (IOC) and Parent Actions and Strategies (PAS) variables were however constrained at the lower end of the scale in this sample. Again this may be an artefact of the research setting and the type of intervention under study; therapists were experienced and well trained in eliciting parental perspectives. In this context it is perhaps not surprising that the lowest scores were not given. Positively, the ability of the scheme to differentiate between sessions and cases at the higher end of the scale despite the skill of the therapists is strength. The high inter-correlation between PPCS variables in the study sample, which was not evident in the pilot, was disappointing, as it limited finer grained questions that could be asked of the data.

Reliability of evaluative schemes tends to be more difficult to establish than for objective counts, and this was the case in this research. Although ICCS for point estimates were in the satisfactory to good range, the confidence intervals associated with these were wide. The small sample size will have contributed to the wide confidence intervals; a larger sample or further tightening of descriptors and more training of coders may improve the situation.

The coding scheme has not yet been externally validated against another measure, due to lack of availability of a suitable scheme. The recently published Verona coding scheme, which aims to code patient expressions of emotional distress and health providers responses in direct medical consultations, has some similarities in intent, (Del Piccolo, Mead et al. 2005, Zimmermann, Del Piccolo et al. 2011). The definition of ‘cues’ in this scheme is similar to the limited descriptor for Parent Self Disclosures in the PPCS while ‘concerns’ are similar to the detailed descriptor. Health provider responses in the Verona scheme are coded in terms of explicitness and space, which again are bear some relation to the PPCS integration dimension, with a number of the individual sub-codes being comparable (e.g. Verona codes ignore, postponing, exploration). Investigation of whether it would be appropriate to validate the PPCS, or at least the PSD theme, and the Verona scheme against each other in future might be worthwhile.
The relatively small sample size for the PPCS variables (20 cases) means that any interpretations of these need to be treated with care. Video-coding lengthy sessions is a time-consuming process, and although the coding scheme was kept as minimal and efficient as possible to answer the research questions, the method restricted the size of the sample that could be investigated within the resources available. It would be useful in future to experiment with coding shorter sections of the video to see if a sampling technique would give equivalent results to coding the whole video. Although this was briefly considered in the design phase, the concern at the time was that sampling may miss potentially important episodes, particularly of parent self-disclosures; however had it allowed for a larger sample size this may have been a justifiable trade off. Investigation of the validity of sampling would be recommended before using the scheme on another dataset.

4.4.3 Direction of influence

It has been argued that it is not possible to determine the direction of influence of factors in much alliance research (Kazdin and Nock 2003, Crits-Christoph, Gibbons et al. 2006). In the case of parent-rated alliance in this study this is not a major issue; the two factors found to associate with alliance, i.e. Belief in MMR and Post 16 qualifications, were baseline characteristics measured before the start of intervention. As such the direction of influence for these factors is clear. However the situation for the factors involved in therapist-rated alliance is more complex. The variables measuring the expression and integration of parental perspectives are process variables, measured during the intervention as alliance is evolving, and as such it could be that they are influenced by the alliance rather than the other way round. For instance it could be argued that, rather than the therapist-rated alliance being higher because the therapist feels successful in eliciting parental perspectives and integrating them into the session, the reverse is the case i.e. because alliance is high (for other reasons) the therapist is able to elicit and integrate parent perspectives. It is not possible to disentangle this within the research design used; mediation analyses including outcome data would need to be employed. Therapist fidelity, as defined and calculated for this research, is more of a characteristic of the therapist i.e. it is a single measure of the therapist’s average fidelity to intervention throughout the trial, rather than a process measure of fidelity within each individual case. As such the direction of influence here is a bit more straightforward.
4.6 Clinical and educational implications

The findings of this research have a range of implications for clinicians delivering parent-mediated interventions and for clinical educators. First and foremost, the initial review of the alliance literature highlights the fact that clinicians should be interested in improving the quality of alliance with parents; there is a vast accumulation of evidence that better alliance is consistently associated with better outcomes, and that this is true for a wide range of client groups and treatment types. Even though literature specifically on the parent alliance-outcome association is currently limited, it is consistent with what has been found for direct adult clients i.e. alliance matters. The extent to which alliance as a concept has been embraced and researched varies enormously in different health related fields; there are numerous publications from psychiatry and psychology for example, but very few from allied health related disciplines. The PACT intervention was designed as a communication focused intervention, to be delivered by speech and language therapists. Speech and language therapists regularly intervene and work with parents, yet despite an extensive literature search no other studies specifically examining alliance in a speech and language therapy intervention have been found. This is not to say that the profession has not considered relationships to be important, but that they have not been systematically and empirically researched in the way that application of alliance theory has allowed in other disciplines.

Specifically the findings of this research suggest that clinicians should be aware that their perception of the quality of alliance may not be congruent with the parent’s. Clinicians would be advised to reflect on this and find ways to regularly ascertain the parent’s view of the alliance, either through use of regular checklists at specific points in treatment, or through direct discussion of aspects of the alliance such as agreement on goals.

As more becomes known about factors influencing the quality of alliance with parents, clinicians can try to use this information to enhance alliance. In this study the two baseline factors found to significantly associate with parent-rated alliance, i.e. level of educational qualification and belief in MMR as a causal factor, are characteristics of the client and consequently not clearly in the therapist’s power to influence. However, the finding that a specific parental belief about the cause of autism in their child associates with lower alliance should encourage clinicians to investigate and discuss causal beliefs with parents. It may be possible to modify the parent’s belief through discussion, or if not, it may be enough for alliance to have openly discussed the belief and the reasons for it.
An understanding of process variables that associate with alliance offers more scope for therapists to work on improving their alliances. Despite the non-significance of the result, the finding here that parent-rated alliance was consistently rated more highly across all the PPCS variables measuring the expression and integration of parental perspective, suggests that clinicians should place some importance on eliciting and responding to parental views and observations. These are skills and behaviours that can potentially both be trained and, importantly, built into the design of interventions.

There is some preliminary evidence from the literature that both therapist training and intervention design can be effective ways of improving quality of alliance. Crits-Christoph, Connolly Gibbons et al. (2006) designed a manualised intervention, alliance fostering therapy, which incorporated alliance building techniques into interpersonal-psychodynamic therapy. The rationale was for alliance enhancing behaviours, based on evidence from the literature, to be an integral part of the intervention. Five therapists attended an initial training workshop on the therapy, then completed 3 cases with intense supervision followed by a further three post-training cases, without the intensive supervision. A moderate to large effect in patient-rated alliance was found in the post-training phase, though with a small sample size this was not statistically significant. A between-therapist variation in the extent to which therapists improved their alliances was also found leading the authors to conclude that alliance training may be most effective for therapists early in their clinical training and possibly only for those who tended to form lower quality alliances pre-training. The PACT intervention bears similarities to alliance fostering therapy in that strategies believed to enhance alliance, such as the elicitation and integration of therapist perspective as investigated in this thesis, have been included as an integral part of the manualised intervention. Clinicians designing or adapting manualised interventions could consider integrating alliance enhancing strategies alongside therapeutic techniques in a similar manner.

The alternative approach is for clinicians to be trained in alliance building strategies separately from the manualised interventions. Smith-Hansen, Constantino et al. (2011) used this approach to investigate the impact of participation in a video-assisted training workshop on the quality of alliance. 57 community based therapists, using a range of therapeutic interventions, participated in a three hour workshop before working with a new client. Although a positive correlation between therapist-reported use of the strategies taught in the workshop and therapist-rated alliance was found, there was no difference in alliance ratings between therapists who attended the training and a group of controls who were to be given
delayed training. The authors concluded that, although a popular training format, a single workshop may not be enough to bring about improvements; this view has implications for clinical educators and the formats in which alliance training may be given. Bambling, King et al. (2006) tried a different approach to training, using supervision rather than workshops. Their study involved 3 groups; therapists in the control group were given no supervision, a second group were given supervision focussing on alliance processes i.e. on discussing the developing relationship between the therapist and client, and a third supervision focussing on alliance skills i.e. on the therapist’s use of behaviours believed to relate to the quality of alliance. Significantly higher client-rated alliance was found for the two supervised groups (with no difference between them) than for the group with no supervision, suggesting that therapist supervision focussing on the alliance is an effective method for improving the alliance as viewed by clients.

Taken as a whole these studies imply that supervision, including a focus on the alliance, early in training may be most effective method for training therapists to form quality alliances. Integrating this view with the findings of this research suggests that regular supervision, incorporating a focus on the quality of the elicitation and integration of parent’s perspectives, may be effective in increasing both parent and therapist rated alliance in parent-mediated interventions.

4.7 Implications for future research

Some suggestions for future research have been made in context within the discussion; this section aims to draw these together. Alliance research with parents remains limited, especially in the context of the type of interventions delivered within the allied health professions, and there are a number of directions in which research could usefully go.

As in all areas of alliance research an important step would be to develop and agree an alliance questionnaire for use with parents. Although the meta-analytic work by Horvath, Del Re et al. (2011) and Shirk, Karver et al. (2011) has found that the measure used does not significantly alter findings in relation to the outcome association, consistent use of a measure would facilitate comparison across studies. There is a strong argument for adapting one of the widely-used and validated measures from the adult direct client literature, with the WAI, either in its full or revised short form, being a strong contender. The conceptualisation of alliance theoretically underpinning the WAI (i.e. that good quality alliance provides a facilitative
context for the work of therapy) translates well into the context of an indirect adult client, such as a parent or carer. The findings of this research suggest that factor analysis of the alliance measure in the context of the intervention/client group under investigation, and the use of the component parts alongside the total alliance score in analyses, can yield interesting information. It would be useful to see whether the factor structure found here replicates for larger samples of parents and for parents undertaking different parent-mediated interventions.

Further research on the patterns of development of alliance with parents across intervention would be informative for both therapist training and to inform the design of interventions.

Research including a wider range of variables than was possible here would be valuable, in particular variables related to the parent’s personality, social relations and level of social support. Information on the effect of parental mental health and well-being on alliance formation would also be clinically useful. As discussed in the introduction to the thesis, the literature on experiences of parents of children with autism suggests that variables of maternal stress (Quintero and McIntyre 2010), fatigue (Giallo, Wood et al. 2013), resolution with diagnosis (Wachtel and Carter 2008) and levels of social support (Altiere and von Kluge 2009) warrant investigation as potential specific factors contributing to quality of alliance in the context of parent-mediated interventions. Although intended to be supportive and empowering to parents, parent-mediated interventions do place additional demands on parents and, by their nature, put some of the responsibility for their child’s progress in their hands. Levels of maternal well-being and support may influence the extent to which parents feel able to engage in this type of intervention. Research that has been done investigating measures of parent mental health as outcome variables in parent-mediated intervention has found that levels of maternal stress remain the same (Kucuker 2006) or are slightly raised (McConkey, Truesdale-Kennedy et al. 2010) following intervention, suggesting that they may be more appropriately investigated as moderating or mediating factors. There has been little work done so far on the possible influence of these variables as mediators of either alliance or outcome. If quality of alliance is found to be related to these parent variables, it may be that improvements can be made by building in elements to interventions that support parents’ mental health, or by providing additional support focussed on the parent’s needs alongside the child’s.

A further avenue of research likely to be fruitful is to conduct research directly with parents, to ascertain their views of factors which influence their alliance with therapists. This could be approached through the use of focus groups or carefully designed questionnaires. Possible
variables resulting from such investigations could then be included in further empirical testing of factors related to parent-rated alliance.

Once process factors influencing quality of parent-therapist alliance have been identified, further research into the most effective ways of training therapists to improve their alliance-enhancing behaviours would be beneficial. More information on the effectiveness of workshop based training and ongoing supervision would be of interest to clinical educators, as would research into the relative effects of individual, group and peer to peer supervision. This could include investigations into whether such training is most useful with less experienced/trainee clinicians and with clinicians who typically have difficulty forming quality alliances or whether all clinicians can benefit.

Methodologically, more sophisticated statistical techniques, such as mediation analyses, could be employed to explore the relationship between associating baseline and process factors, alliance and outcome in a single analysis. As with this study, much alliance research currently focuses either on the association with outcome or on the association with factors thought to influence quality of alliance. Research that integrates predictors, alliance and outcomes into a single model would be illuminating.

### 4.8 Concluding Remarks

The research presented in this thesis contributes to the currently limited literature on therapeutic alliance in parent-mediated interventions. To the author's knowledge, it represents the first empirical study of alliance with parents in an intervention delivered by speech and language therapists. It is also one of only a few studies in the wider literature to focus on the baseline and process factors associating with parent-therapist alliance. In terms of alliance theory the research has added evidence consistent with the view that, although the alliance-outcome relationship seems to be robust across therapies and client groups, the underlying components of alliance, and factors influencing the quality of alliance, may differ and should be ascertained and investigated separately.

The novel angle of this research has been to include, alongside the more traditionally researched variables of demographic factors, client and therapist characteristics and therapist fidelity, variables related to the beliefs and perspectives of parents. The research incorporated a comprehensive exploration of the beliefs that parents hold about the causes of autism in
their child, presented in Paper 1. It found that, in a UK based sample, these beliefs are wide ranging and for the most part individually held rather than demographically influenced, with epigenetic or gene-environment interaction causes increasingly finding favour. In one of the first studies to investigate empirically whether causal beliefs held by parents influence their ratings of alliance in a specific type of intervention, a belief in the MMR vaccine as a possible cause was found to be negatively associated with alliance, i.e. those who believed that MMR may have caused their child’s autism rated the alliance lower in a psychosocial, communication based parent mediated intervention. This finding alludes to the possibility of specific causal beliefs influencing parents’ ratings of alliance in different types of intervention and highlights the potential importance of eliciting and openly discussing parental causal beliefs in intervention.

The inclusion in the research of process variables assessing the quality of the expression and integration of parental perspectives within an intervention session was also novel and necessitated the development of a new instrument, the Parental Perspectives Coding Scheme, which was the focus of Paper 2. Items for the PPCS were generated inductively from thematic analysis of in-session parent-therapist dialogue, giving them ecological validity. The findings of the qualitative analysis both confirmed previous reports about the beliefs and perspectives of parents of children with autism and the demands of parenting a child with autism, and contributed new insights into these issues. The PPCS proved successful in differentiating sessions and coders could be trained to reliability. It is hoped that the instrument may be of use in other research contexts and also as a tool to aid clinicians to reflect on the extent to which they are successful in eliciting parental perspectives on a range of themes and integrating them appropriately into a session.

The analysis of associations between PPCS expression and integration variables and alliance found that the quality of expression and integration of parental perspectives was consistently coded as higher in the high parent-rated alliance group than in the low one, though the difference in this small sample was not significant. For therapists, on the other hand, the higher the quality of expression and integration of parental perspectives, the significantly higher they rated the alliance. These findings give the first empirical backing to the idea that the extent to which parents and therapists incorporate quality discussion of parental perspectives throughout intervention sessions may influence alliance, which in turn may impact on outcomes.
The multivariate models presented in Paper 3 have extended previous research by investigating the combined effect of individually significant baseline and process variables on parent-rated and therapist-rated alliance. The parent-rated model, including MMR causal belief and Post-16 Qualifications as variables, accounted for 18.3% of variance in alliance, which although a substantial amount in alliance research, indicates that there is much still to understand about factors that contribute to parental ratings of the quality of alliance. The therapist-rated model, including variables for therapist fidelity to the intervention model and for the quality of expression and integration of parental perspectives accounted for a larger 58.8% of variance. The care taken to ensure independent and blind rating of baseline and process variables and alliance is a strength of the research and allows for confidence in the results.

The findings reported in this thesis are important contributions to our understanding of the alliance and the relationship between parent and therapist in intervention. Parent-mediated interventions are increasingly recommended and employed in children’s services. Given the documented relationship between alliance and outcomes, evidence that assists clinicians in raising the quality of therapeutic alliance in intervention should result in better outcomes for the families they see.
References


NICE (2013). "Autism. The management and support of children and young people on the autism spectrum.".


Appendix A

PACT Alliance Questionnaires

The PACT alliance questionnaires were devised for the PACT trial using items adapted from the Working Alliance Inventory (Horvath and Greenberg 1989) and the Family Engagement Questionnaire (Green, Kroll et al. 2001).
### Parent Alliance Questionnaire items

<table>
<thead>
<tr>
<th>Statement</th>
<th>1 Strongly Agree</th>
<th>2 Agree</th>
<th>3 Slightly Agree</th>
<th>4 Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am open and honest in what I say to the therapist in treatment sessions.</td>
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<tr>
<td>2. I have been able to confide my real problems in relation to my child to the therapist and they have understood.</td>
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<tr>
<td>3. I feel that I understand the nature of the treatment being offered and the reasons for it.</td>
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<td>4. The treatment being offered is going to change the things that I want to change.</td>
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<td>5. I think this treatment will be a real long term help.</td>
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<td>6. *I feel uncomfortable with my therapist</td>
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<tr>
<td>7. What I am doing in the treatment gives me new ways of looking at the situation.</td>
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<tr>
<td>8. *I find what I am doing in the treatment confusing.</td>
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<tr>
<td>9. I believe the therapist likes me as a person.</td>
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<tr>
<td>10. I believe the time the therapist and I are spending together is spent efficiently.</td>
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<tr>
<td>12. I am clear on what my responsibilities are in the treatment.</td>
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<tr>
<td>13. The goals of these sessions are important to me.</td>
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<tr>
<td>14. I believe the therapist is genuinely concerned for my child's welfare.</td>
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<tr>
<td>15. The therapist and I respect each other.</td>
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<tr>
<td>16. I am confident in the therapist's ability to help me help my child.</td>
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<tr>
<td>17. We agree on what is important to work on.</td>
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<tr>
<td>18. As a result of these sessions I am clearer as to how I might be able to change things with my child.</td>
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<tr>
<td>19. The therapist and I trust one another.</td>
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<tr>
<td>20. My relationship with the therapist is very important to me.</td>
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<tr>
<td>21. *I have the feeling that if I say the wrong things, this will affect the treatment I’m given.</td>
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<tr>
<td>22. The therapist and I work together on setting goals for the treatment.</td>
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<tr>
<td>23. *I am frustrated by the things I am doing in the treatment.</td>
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<tr>
<td>24. *The things that the therapist is asking me to do don’t make sense.</td>
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<tr>
<td>25. *I don’t know what to expect as a result of the treatment.</td>
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<tr>
<td>26. I believe the way we are working with my child’s problems is correct.</td>
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</tbody>
</table>

*Reverse worded item removed after factor analyses (Section 3.5)*
### Therapist Alliance Questionnaire items

<table>
<thead>
<tr>
<th>Statement</th>
<th>1 Strongly Agree</th>
<th>2 Agree</th>
<th>3 Slightly Agree</th>
<th>4 Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The parent appears resistant towards the intervention, overtly or covertly.</td>
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<td>2. The parent mistrusts or seems suspicious of me.</td>
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<td>3. I have difficulty in getting the parent to take part in therapeutic activities.</td>
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<td>4. The parent makes an effort to attend sessions.</td>
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<tr>
<td>5. The parent is interested in me and shows warmth and rapport.</td>
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<td>6. The parent confides in me about personal or family problems.</td>
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<td>7. The parent uses therapeutic sessions appropriately and is motivated towards them.</td>
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<td>8. I consider I have achieved an accurate empathic understanding of the parent’s real difficulties in relation to their child.</td>
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<tr>
<td>9. The parent has understood and accepted the nature of the treatment and the reason for its use.</td>
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<td>10. The treatment offered will meet the parent’s own goals for change.</td>
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<tr>
<td>11. On a personal level, I like the parent.</td>
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<tr>
<td>12. The parent is committed to the treatment.</td>
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<tr>
<td>13. The treatment will be a real help in this case.</td>
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<tr>
<td>14. I feel that the parent is able to understand and accept my viewpoint in sessions.</td>
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<td>15. The parent has the capability to make good progress in the treatment</td>
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<td>16. We are working towards mutually agreed upon goals.</td>
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<tr>
<td>17. I feel uncomfortable with the parent and/or child.</td>
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<tr>
<td>18. I do not feel we are using the time together efficiently.</td>
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<tr>
<td>19. The parent is clear about his/her responsibilities in the treatment.</td>
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<tr>
<td>20. The parent and I respect each other.</td>
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<tr>
<td>21. We have established a good understanding of the kind of changes that would be good for the child</td>
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<tr>
<td>22. I believe the way we are working with the child’s problems is correct</td>
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</table>
Appendix B

Parent Perspectives Coding Scheme

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Parent Perspective Coding Scheme - Manual

Introduction

The Parent Perspective Coding Scheme (PPCS) is a tool to evaluate the extent to which a parent’s perspective on factors related to their child’s disorder and the advice they are being given is expressed in detail and integrated into an intervention session.

Sessions are subjectively evaluated after viewing a videoed recording of the session. During viewing of the videos tallies/notes are made on the PPCS score sheet against descriptor items which assist in the final overall subjective evaluations. Video recording is required so that both parents’ and therapists’ non-verbal communication can be taken into account. Three main themes on which parent perspective might be expressed are considered:

- Interpretation of Child,
- Parent Actions and Strategies
- Parent Self Disclosures

The dialogue included in each of these themes is described in detail in the relevant sections in the main body of the manual.

The dialogue on each theme is evaluated on rating scales in 3 domains.

- **Time**: The Time Domain considers what proportion of time in the session is devoted to discussing the theme.
- **Parental Expression**: The Parental Expression Domain considers the level of detail in which the parent’s perspective on the theme is expressed. The parent’s perspective may be spontaneously given, elicited in response to a specific therapist probe or given in response/reaction to a therapist’s stated perspective.
- **Therapist Integration**: The Therapist Integration Domain considers the extent to which the therapist acknowledges and integrates the parent’s expressed perspective on the theme into the ongoing intervention session.

Well defined descriptors for the rating scales for each of the themes in each domain are given in the relevant sections below. Examples adapted from real session data are included to help with coding decisions.
Expression of Parent Perspective - Interpretation of Child

Definition

In this theme, score dialogue in which the therapist and/or parent attempts to explain or understand the child’s actions, communications or thoughts.

Consider all sections of dialogue where interpretation of the child’s feelings, communication, behaviour and/or motivation is the focus of discussion. Parents’ interpretations may be expressed spontaneously, in response to an eliciting probe from the therapist (e.g. how do you think he was feeling then?) or as a reaction to the therapist’s interpretation (e.g. therapist: I think perhaps he was starting to get over excited and finding it all too much; parent: yes maybe, I was wondering that myself). Dialogue must include more than a simple description of what the child was doing (e.g. ‘he got up and went off’); it must include some interpretation by either the parent or by the therapist for the parent to respond to (e.g. ‘he got up and went off because he’d had enough of that toy’; or ‘maybe he got up and went off cos he didn’t like you showing him what to do’). This theme would include any interpretations/advice based on the child’s autism e.g. ‘many children with autism find too much noise over-stimulating; perhaps that’s what’s happening with him’.

Discussion about the potential impact of a parent action/strategy on the child (i.e. what the child might do if the parent did something) will be scored here as well as under Parent Actions and Strategies if the suggested impact is based on an interpretation of the child.

For each of these sections of dialogue consider whether and in how much detail the parent’s interpretation of the child is expressed according to the definitions below. As well as what the parent actually says non-verbal communication such as facial expression, nodding, dropping eye-contact will be very important in making a judgement.

If dialogue about the interpretation of the child is not initiated by either the parent or therapist (verbally or non-verbally) then this is scored as ‘never’ under the Time domain and no evaluation can be made under the Expression or Integration domains

Descriptors

Detailed: To be considered a Detailed interpretation of the child the parent should have clearly explained what they think about their child’s feelings/behaviour/communication/motivation and given some indication of the rationale behind their interpretation; this may include giving other examples where similar behaviours have occurred or explaining directly why they think it. It would also include interpretations based on the parent’s knowledge of the child provided that knowledge is shared in the discussion e.g. ‘he liked that toy because he’s really into flashing lights at the moment.’ This Detailed expression may be spontaneous or may be in response to either therapist exploration of what they first said, or a therapist probe, or a therapist interpretation with which they either agree or disagree.

As an observer you are confident that what the parent has said has given you a very good understanding of what the parent is thinking about their child’s feelings/behaviour/communication/motivation in the episode under discussion; and at least some understanding of why they might think it.
Examples

Detailed expression of interpretation of child’s motivation
Therapist: so what’s he, what’s he doing here, what does he want you to do?
[watch video]
Parent: he wants me to join in with his game
Therapist: so he wants you to go along with it?
Parent: yes
Therapist: why do you think that?
Parent: he looks at me
Therapist: he looks at you, yes.
Parent: it means repeat after me or join in, it’s your turn
Therapist: Right.
Parent: (to child, in response to child’s look) Hello froggy. (To therapist) Like he’s doing right now

Detailed expression of interpretation of child’s understanding
Therapist: Do you think he understood ‘wet’ there?
Parent: Yeah. Because he stopped being so bothered about the bubbles and was...
Therapist: Uh-huh.
Parent: more interested in what was in there then.

Reasonably Detailed: To be considered a Reasonably Detailed interpretation the parent will either have verbally given their own interpretation or verbally responded to a therapist interpretation but will not have expanded on this or given the therapist any understanding as to why they think it; the interpretation is short and not explained.

Brief positive responses to therapist interpretations, such as ‘Yeah’ or ‘Mmm, hmm’, would be considered Reasonably Detailed provided this agreement is clearly indicated by the use of additional positive words such as, ‘absolutely’, ‘definitely’ or unambiguous non-verbal signals such as vigorous nodding of the head. This is because as an observer you are clear what the parent’s interpretation is, i.e. it is the same as the therapist’s. If the parent goes on to give a reason of why she agrees or examples of child behaviour that fit with the interpretation then this would raise the score to Detailed.

Negative responses to therapist interpretation however would have to include some alternative interpretation to be scored Reasonably Detailed; an explanation of the alternative interpretation would raise the score to Detailed; an indication of disagreement, without the offer of an alternative interpretation would be scored as Limited since, although as an observer you know the parent disagrees with the therapist’s interpretation, you do not have any indication what their own interpretation is.

Overall, as an observer the parent has said enough for you to have an fairly good idea of what she thinks about the child’s feelings/behaviour/communication/motivation in the episode under discussion, and/or whether she is in agreement with the therapist’s interpretations or if not what her alternative interpretation is. However her interpretation is not expanded on or explained and you are left with the impression that that she might have had more to say/ could have given more detail to assist the therapist in understanding her perspective and in knowing the rationale behind it.
Examples

Reasonably detailed expression of interpretation of child’s communication

Therapist: So do you think he’s listening to you more?
Parent: Yeah, he's starting to listen.
Therapist: Understanding more?
Parent: Yeah, he's starting to understand more but not too much.
Therapist: Okay, but that’s a start, isn’t it?
Parent: Mm.

Reasonably detailed expression of interpretation of child’s behaviour

Parent: He didn’t want me to see it [a toy].
Therapist: Okay.
Parent: He stayed away from me.
Therapist: So he thinks you might take it back?
Parent: Yeah, yeah.
Therapist: So he’s gone off with it.
Parent: Yeah.

Limited Detail: To be considered a Limited Detail interpretation the parent will have given some hint of what they think about the child’s communication/behaviour/motivation in the episode under discussion and/or whether they agree or not with the therapist’s interpretations. However this is not explicitly verbalised and you have to infer from what little the parent has said and/or their non-verbal communication. This would include occasions where a parent gives a minimal ‘mmm’ or ‘yeah’ in response to a therapist’s interpretation, which on the surface may seem to indicate agreement with the therapist but leaves doubt in your mind as an observer as to whether that really is what they think. Similarly the parent perhaps indicates possible disagreement or confusion by facial expression but does not verbally express that. Instances where verbal and non-verbal signals conflict – for example the parent says they agree with the therapist but their non-verbs seem to indicate otherwise - would be scored as Limited.

If the parent uses a lot of ‘mms’ and ‘yeahs’ etc. as back channel responses to the therapist’s interpretation and does not then go on to expand on these this would be scored as Limited as the parent has not given any definite indication of her perspective. If however the parent uses back channel responses while the therapist is giving her interpretation but then goes on to expand as in the Reasonably Detailed or Detailed descriptions above then these back channel responses would be ignored and her overall response recorded as Reasonably Detailed /Detailed as appropriate.

Overall, as an observer, you can make some inferences from the parent’s minimal responses and non-verbal communication about what the parent is thinking about the child’s communication/behaviour/motivation in the episode under discussion but you cannot be definite about these inferences or be clear about whether the parent agrees or not with the therapist’s interpretations.

Examples

Limited expression of interpretation of child’s behaviour

Therapist: Because he made a sound then, didn’t he?
Parent: Mm.
Therapist: And you copied him.
**Limited expression of interpretation of child’s perspective**

**Parent:**  
Mm.

**Therapist:**  
Yeah. Do you think he noticed?

**Parent:**  
Mm.

**Therapist:**  
He certainly likes to choose, doesn’t he?

**Parent:**  
Mm.

**Therapist:**  
He knows about choosing.

---

**No Detail:** To be considered a No Detail interpretation the parent will not have given any discernible response to a therapist interpretation or an attempt by the therapist to elicit an interpretation. As an observer you have no idea how the parent interprets the child’s feelings/communication/behaviour/motivation in the episode under discussion.

**Note:** Expressing being unable to interpret the child may be counted as an interpretation provided it is clear that the parent has given/is giving the issue some thought. A Detailed interpretation might be ‘I have no idea what that means, sometimes I thinks it’s x because of this and other times I think it’s y’. A Reasonably Detailed interpretation might be ‘I’ve thought about it but I really don’t know what he’s thinking when he does that’. A Limited Detail interpretation might be a simple ‘I don’t know’ in response to a therapist probe.
Expression of Parent Perspective

Interpretation of Child - Scoring

Whilst viewing the video make a judgement of each relevant section of dialogue as No Detail, Limited Detail, Reasonably Detailed or Detailed expression and keep a tally on the record form.

If wavering between two definitions score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly No Detail: The parent rarely gives an interpretation or a discernible response to a therapist interpretation, those few that are given are Limited. There are no examples of the parent giving a Reasonably Detailed or Detailed interpretation; these would warrant raising the score by one point. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent takes a very passive role and the therapist’s interpretations of the child dominate with little reaction from the parent. As an observer you have very little idea what the parent thinks and why and/or whether they agree with the therapist’s interpretations of their child.

2. No Detail – Limited Detail: The parent gives both No Detail and Limited Detail interpretations in roughly equal proportions. There may be occasional examples of a Reasonably Detailed interpretation but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. There are no examples of the parent giving a Detailed interpretation – this would warrant raising the score by one point. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the therapist’s interpretation still dominates but the parent does at least give limited insight into their interpretation some of the time and/or a verbal interpretation at least once. As an observer you can sometimes make inferences about what the parent thinks and/or whether they agree with the therapist, though you cannot be confident about these, but equally some of the time you have no real idea.

3. Mostly Limited Detail: The parent gives mostly Limited Detail interpretations/ responses to therapist interpretations. There may be examples where either a No Detail interpretation or a Reasonably Detailed/Detailed interpretation is given but these are not characteristic of the session and are not of sufficient frequency to warrant lowering (to 2) or raising (to 4) the overall score. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent is consistently giving hints to her interpretation but it is rarely expressed in an explicit way. As an observer you can usually make
inferences about what the parent thinks and whether or not they agree with therapist interpretations, but cannot be confident about these.

OR

**No Detail-Limited Detail-Reasonably Detailed.** The parent gives both Limited Detail and Reasonably Detailed interpretations but there are also sufficient examples of No Detail interpretations to warrant lowering the score from a 4 to a 3. This is a session where the level of detail of interpretations the parent gives varies; although sometimes she verbally gives interpretations (though not in much detail) at other times you have to infer what she is thinking and/or whether or not she agrees with the therapist’s interpretations, and at other times still you have no idea what her interpretation is and/or whether or not she agrees with the therapist’s interpretations.

4. **Limited Detail-Reasonably Detailed:** The parent gives both Limited Detail and Reasonably Detailed interpretations in roughly equal proportions. There may be occasional examples of either a No Detail interpretation or a Detailed interpretation but these are not characteristic of the session and are not of sufficient frequency to warrant lowering (to 3) or raising (to 5) the overall score. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent is consistently giving her interpretation but it is rarely fully explained; rather it is sometimes only indicated in a limited way. As an observer you sometimes know what the parent is thinking and whether or not they agree with the therapist’s interpretations, though not in full detail or why, but equally the rest of the time you have to infer.

5. **Mostly Reasonably Detailed:** The parent gives mostly Reasonably Detailed interpretations. There may be examples of Limited Detail or Detailed interpretation but these are not characteristic of the session and not of sufficient frequency to warrant either lowering or raising the overall score. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent consistently gives her interpretation but it is rarely explained or explored in depth. As an observer you know what the parent thinks most of the time, and whether or not they agree with the therapist’s interpretations, but you rarely know this in any detail, or know why she thinks it.

OR

**Limited Detail-Reasonably Detailed-Detailed.** The parent gives both Reasonably Detailed/Detailed interpretations but there are also sufficient Limited interpretations to warrant lowering the score from a 6 to a 5. This is a session where the level of detail of interpretations the parent gives varies; sometimes their interpretations are detailed and explained but at other times you have to infer what she is thinking and/or whether or not she agrees with the therapist’s interpretations.

6. **Reasonably Detailed-Detailed:** The parent gives both Reasonably Detailed and Detailed interpretations in roughly equal proportions. There may be examples of Limited Detail interpretations but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score; if there are sufficient Limiteds alongside the Reasonably
Detailed/Detailed interpretations then the score should be lowered to a 5. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent is consistently giving her interpretation, explaining it in full detail at least some of the time. As an observer you consistently know what the parent is thinking and whether or not she agrees with the therapist’s interpretations, and some of the time you know this in detail and why.

7. ** Mostly Detailed:** The parent gives mostly Detailed interpretations along with some Reasonably Detailed interpretations. There may be examples of Limited Detail interpretations but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where, when interpretation of the child’s communication, behaviour and/or motivation is the focus of discussion, the parent is actively and consistently giving full and detailed explanations of her interpretation of the child. As an observer most of the time you consistently and confidently know in detail what the parent is thinking and why, and whether or not she agrees with the therapist’s interpretations.
Expression of Parent Perspective - Parent Actions and Strategies

Definition

In this theme score all dialogue where consideration of the parent’s actions in the interaction with the child, by either the parent or the therapist, is the focus of the discussion.

Consider all sections of dialogue where the focus is on:

- reflecting on/explaining the parent’s actions in the video
- reflecting on/explaining the parent’s usual strategies with the child
- discussing strategies that the parent suggests might work with the child (either spontaneously or in response to an eliciting or guiding probe from the therapist.)
- discussing strategies and/or any other advice offered by the therapist about what the parent should do to improve interaction with the child.
- discussing the potential impact of a parent action/strategy on the child

Discussion of the potential impact of a parent action/strategy on the child (i.e. what the parent thinks the child might do/think if she does something) should be scored here but may also be scored under Interpretation of the Child if the reasoning behind the proposed impact includes a specific interpretation of the child. All dialogue where the therapist is suggesting strategies and/or offering advice to the parent about what she should do to improve her interaction with the child should be scored here.

For each of these sections of dialogue consider whether and in how much detail the parent explains/reflects on her actions and their possible impact on the child and/or expresses her reaction to the therapist’s strategies/advice according to the definitions below. As well as what the parent actually says non-verbal communication such as facial expression, nodding, dropping eye-contact will be very important in making a judgement.

Parent’s explanations/reflections/reactions may be expressed spontaneously or in response to an eliciting probe from the therapist (e.g. what were you thinking just then? do you think that might work?).

If dialogue about parent’s actions or strategies is not initiated by either the parent or therapist (verbally or non-verbally) then this is scored as ‘never’ under the time domain and no evaluation can be made under the expression or integration domains

N.B. Note that this theme scores advice from the therapist on parent actions/strategies – advice on how to interpret the child (with or without reference to children with autism in general) would be scored under Interpretation of the Child.

Descriptors

Detailed: A Detailed expression of perspective on parent actions and strategies will be as follows. In explaining or reflecting on her own actions the parent will have fully considered and explained what they were doing/habitually do, and will have given some indication of why they do this and/or what they perceive the impact of their actions to be on the child. This may have
included for example discussing own strategies that the parent deliberately uses or reflecting on actions seen on the video. Similarly in reacting to any therapist advice about the parent’s actions or about strategies she might use the parent will have fully explained what she thinks about the advice/strategy and why. This may include for example expressing any previous experiences with the strategy; discussing how she thinks the child may react; discussing fully any clashes with her belief sets or with previous advice given. If the parent is in agreement with the strategy she will have expanded on what therapist has said, giving examples of how it might work, has worked in the past and/or why she thinks it might work. If the parent is in disagreement, or has reservations, these will have been explicitly expressed. These Detailed expressions may be spontaneous or may be in response to therapist exploration of their initial reaction.

As an observer you are confident that what the parent has said has given you a very good understanding of:

- why the parent has interacted with the child in the way they do
- And/or how they think their actions impact on the child
- And/or what the parent thinks about the advice/strategies under discussion and why.

Examples

Detailed parent explanation of own actions

Therapist: so what were you doing there?
Parent: I was pausing
Therapist: Pausing. What were you pausing for? Anything in particular?
Parent: for him to say, also to signal what he wanted
Therapist: mm hhm, and do you often pause?
Parent: Mm hhm
Therapist: And do you know how long to pause?
Parent: I wait, and I look at him, and he knows I am waiting for him to say it
Therapist: Mm hhm
Parent: and then sometimes he responds and sometimes he doesn’t.

Detailed parent reflection on own actions

Therapist: And would you say use the same words each time?
Parent: No, I just heard, er, what I’m saying...
Therapist: Yeah.
Parent: I said press then I said push...
Therapist: Uh-huh.
Parent: and actually I should have stuck to one shouldn’t I really?
Therapist: Why? Okay, let’s talk about that. Why...why should you stick to one?
Parent: Cos it’s the first time he’s knowing what the action is...
Therapist: Uh-huh.
Parent: and then I think if I say different words, he’ll be thinking which one is it.

Detailed parent reaction to therapist’s suggested strategy

Therapist: So what do you think about trying that.
Parent: I know we have to take it slowly but I just feel like I’ve been doing that and it doesn’t work [laughter]. You know what I mean,
Therapist: Yeah.
Parent: I’ve been doing that, I did that and it didn’t work...
Reasonably Detailed: To be considered a Reasonably Detailed expression the parent will have given some verbal consideration and/or explanation of their actions and perhaps their perceived impact on the child, but will not have expanded on this in any real detail. This expression may be spontaneous or in response to a therapist probe or comment. Or similarly the parent will have given some verbal reaction to the therapist’s suggested advice/strategy but not given this in full detail, or explained why they think the way they do.

As an observer the parent has said enough to give you a fairly good idea why they have interacted in the way they have, how they think their actions impact on the child and/or whether they agree or not with any therapist comments about this. However you are left with the impression that the parent could have said more to assist the therapist’s understanding of her perspective. Similarly you are reasonably confident from what they have said that you know what the parent thinks about the therapist’s advice/strategies and whether they are broadly in agreement with them or not. However the parent has not said enough for you to really know why they think it, or you again have got the impression that they might have said more to explain their perspective.

Examples

Reasonably detailed parent reaction to therapist advice/strategy

Therapist: How do you feel about having a go at that?
Parent: it’s not going to be easy but do able
Therapist: Ok
Parent: It’s just you can spend a lot of time trying to just figure out what he wants to play with , never mind anything else

Reasonably Detailed explanation of own actions

Parent: I wanted him to look at me, because he, um, he wasn’t looking at me when he was taking my hand so I was, I pulled myself back

Reasonably Detailed reflection on own actions

Therapist: I mean, you’re not...you’re not actually saying much at that moment in time, though, are you? You’re being very quiet and very still and in response...
Parent: He came, ah, I see what you mean.
Therapist: Do you see what I mean?
Parent: Mmhm.

Limited Detail: To be considered a Limited Detail explanation or reflection on own actions/ own strategies the parent will have given some hint of their thinking but this will not have been explicitly verbalised in any detail. If the parent simply describes her actions without any explanation or reflection then this should be scored as Limited. As an observer you cannot be confident that you understand why the parent has acted in the way they have, how they think their actions impact on the child and/or whether they agree or not with any therapist comments about this. Similarly to be considered a Limited Detail reaction the parent will have given some hint of what they think about the therapist’s advice/strategy but you cannot be confident whether they agree or not with it. In both cases you have to infer from what little the parent has said and/or their non-verbal communication. This would include occasions where a parent gives a neutral/non-committal ’mmm’ or ‘yeah’ in response to a therapist’s comment about their actions or suggested strategy, which on the surface seems to indicate agreement with the therapist but leaves some doubt in your mind as an observer as to whether that really is what they think.
Similarly the parent perhaps indicates possible disagreement or confusion by facial expression but does not verbally express that. Instances where verbal and non-verbal signals conflict – for example the parent says they agree with the therapist but their non-verbals seem to indicate otherwise - would be scored as Limited.

If the parent uses a lot of ‘mms’ and ‘yeahs’ etc. as back channel responses to the therapist’s comment on her actions/suggested strategies and does not then go on to expand on these this would be scored as Limited as the parent has not given any definite indication of her perspective. If however the parent uses back channel responses while the therapist is giving her comments/strategies but then goes on to expand as in the Reasonably Detailed or Detailed descriptions above then these back channel responses would be ignored and her overall response recorded as Reasonably Detailed /Detailed as appropriate.

Examples

Limited Detail reaction to therapist strategy/advice

Therapist: So, you’re going to do the actions with him, continue to speak to him about what he’s doing, yeah, make the sounds of the toys and do the actions with him, yeah.
Parent: Mm.
Therapist: I mean, I...what do you think about continuing with that?
Parent: I...it’s alright, of course...
Therapist: Try it and see.
Parent: Yeah, try and see.
Therapist: See what you think, give it a little bit longer and see what happens

Limited Detail reflection on own actions

Therapist: by what you did today with the game, by just putting yourself back a bit that was sort of making a demand on him
Parent: Mmm
Therapist: Do you see what I mean
Parent: Mmm, yeah

No Detail: To be considered a No Detail explanation or reflection on own actions/own strategies the parent will not have considered or explained her actions/interaction patterns with her child in response to a therapist probe or comment. All discussion about the parent’s actions/interaction patterns is dominated by the therapist’s opinion. Similarly to be considered a No Detail reaction to the therapist’s strategies/advice the parent will not have given any real discernible reaction either spontaneously or in response to a therapist probe. As an observer you have cannot tell what the parent thinks about her own actions, whether she agrees with the therapist’s interpretation of them and/or what the parent thinks about the strategies/advice given. This would include occasions where the parent continually gives back-channel responses to therapist comments such as mmm, yeah with no expansion or non-verbal communication, leaving you unclear what the parent might be thinking and/or whether parent is taking on the advice or just acknowledging but dismissing it.

Examples

No Detail reaction to therapist advice/strategy
Therapist: It can feel like you are spending an awful lot of time digging and building the foundations [laughter] but in a sense if, if we kind of try and put the top layers on before we’ve got those in place then it’ll all be a bit kind of shaky. So it might feel like you’re going over things [laughter] kind of over and over and...

Parent: [blank expression] Hmm.

Therapist: but I think they are kind of vital in terms of helping him to then be able to get to those next steps.

Parent: [blank expression] Hmm mmm.
Expression of Parent Perspective

Parent Actions and Strategies - Scoring

Whilst viewing the video make a judgement of each relevant section of dialogue as No Detail, Limited Detail, Reasonably Detailed or Detailed expression and keep a tally on the record form.

If wavering between two definitions always score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly No Detail: The parent rarely explains or reflects on her own actions or strategies even when prompted and/or mostly gives No Detail reactions to the therapist’s strategies/advice. Those few explanations/reflections/reactions that are given are Limited Detail. There are no examples of the parent giving a Reasonably Detailed or Detailed reaction; these would warrant raising the score by one point. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent takes a very passive role. The only comments about the parent’s actions come from the therapist with no discernible reaction from the parent and/or the therapist’s strategies/advice go unquestioned and uncommented on. As an observer you have cannot tell what the parent thinks about her own actions and strategies, their effect on the child and the advice/strategies the therapist is offering.

2. No Detail – Limited Detail: The parent gives mostly No Detail and Limited Detail, in roughly equal proportions, explanations/reflections on her own actions/strategies and reactions to therapist advice/strategies. There may be the occasional example of a Reasonably Detailed expression but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. There are no examples of the parent giving a Detailed expression; this would warrant raising the score by one point. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the therapist’s comments, strategies and advice still tend to dominate and are largely unquestioned/uncommented on by the parent. However the parent does at least give limited insight into why they act as they do, how they feel it impacts on the child and their reaction to the therapist’s strategies/advice some of the time. As an observer you can sometimes make inferences about what the parent thinks and/or whether they agree with the therapist but you cannot be confident about these.

3. Mostly Limited Detail: The parent gives mostly Limited Detail explanations/reflections on her own actions/strategies and/or reactions to therapist advice/strategies. There may be occasional examples where either a No Detail interpretation or a Reasonably Detailed/Detailed interpretation is given but these are not characteristic of the session and are not of sufficient
frequency to warrant lowering or raising the overall score. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent is consistently giving some hint of the thinking behind her actions, their effect on the child and/or her reaction to the therapist’s suggested advice/strategies but this is rarely expressed in an explicit way. As an observer you can usually infer what the parent thinks but cannot be confident.

4. Limited Detail-Reasonably Detailed: The parent gives mostly Limited Detail and Reasonably Detailed, in roughly equal proportions, explanations/reflections on her own actions/strategies and/or reactions to therapist strategies/advice. There may be occasional examples of either a No Detail expression or a Detailed expression but these are not characteristic of the session and are not of sufficient frequency to warrant lowering or raising the overall score. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent is consistently providing some explanation or reflection on the thinking behind their actions and the possible effect on the child and/or expressing her reaction to the therapist’s suggested strategies/advice but it is rarely fully explained; rather it is sometimes only indicated in a limited way. As an observer you sometimes know what the parent is thinking, though not in detail or why, but equally the rest of the time you have to infer.

5. Mostly Reasonably Detailed: The parent gives mostly Reasonably Detailed explanations/reflections on her own actions/strategies and/or reactions to the therapist’s advice/strategies. There may be examples of Limited Detail or Detailed expressions but these are not characteristic of the session and not of sufficient frequency to warrant either lowering or raising the overall score. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent consistently verbally gives an explanation/reflection on the thinking behind their actions and the possible effect on the child and/or gives her reaction to the therapist’s suggested strategies/advice but these are rarely explained in depth. As an observer you usually have a reasonable idea what the parent thinks about her own actions strategies/advice but rarely do you know this in any real detail, or why she thinks it.

6. Reasonably Detailed-Detailed: The parent gives mostly Reasonably Detailed and Detailed explanations/reflections, in roughly equal proportions, on her own actions/strategies and/or reactions to therapist strategies/advice. There may be occasional examples of a Limited Detail expression but this is not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent consistently verbally gives an explanation/reflection on the thinking behind her actions and/or her reaction to the therapist’s suggested strategies/advice, explaining these in depth at least some of the time. As an observer you consistently know the thinking behind the own parent’s actions/strategies and/or what the parent is thinking about the strategies/advice, and some of the time you know this in detail and why.

7. Mostly Detailed: The parent gives mostly Detailed explanations/reflections on her own actions and/or reactions to the therapist’s strategies/advice with some reasonably Detailed expressions. There may be occasional Limited Detail explanations/reflections but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall
score. This is a session where, when the parent’s actions/strategies in interaction with the child are the focus of discussion, the parent is actively and consistently giving full and detailed verbal explanations/reflections on her own actions/strategies and their effect on the child and/or reactions to the therapist’s strategies and advice. As an observer you consistently and confidently know what the parent is thinking and why in detail.
Expression of Parent Perspective - Parent Self Disclosures

Definition

Consider all sections of dialogue where the parent’s feelings, emotions, personality, beliefs, priorities or sense of self efficacy are the focus of discussion. Discussion on how the parent generally feels about the intervention/child’s progress would also be coded here (as opposed to discussion of specific strategies within the intervention which would be coded under Parent Actions and Strategies). For the purpose of this coding system these are collectively termed ‘self-disclosures’. For each of these sections of dialogue consider whether and in how much detail the parent expresses these according to the definitions below. As well as what the parent actually says non-verbal communication such as facial expression, nodding, dropping eye-contact, will be very important in making a judgement.

It is important to note that this domain is evaluating how explicitly the parent’s feeling/belief is expressed, rather than how strong the feeling/belief itself is – for example a parent may express a strong feeling of stress in only limited detail (e.g. frequent throwaway comments).

Parent’s self-disclosures may be expressed spontaneously or in response to an eliciting probe or comment from the therapist (e.g. ‘how do you feel about that?’; ‘it sounds to me like you’re finding it all a bit much.’). If dialogue about parent’s feelings, emotions, personality, beliefs or sense of self efficacy is not initiated by either the parent or therapist (verbally or non-verbally) then this is scored as ‘never’ under the time domain and no evaluation can be made under the expression or integration domains.

Descriptors

Detailed: To be considered a Detailed self-disclosure the parent should have clearly and fully explained what she is feeling or thinking or believes, and may also have described how she feels it impacts on her interactions with her child/ her engagement with therapy. This may include for example expressing a feeling of rejection by the child which has resulted in her giving up trying to interact with him; expressing a belief that adults should not play; expressing a feeling of being overwhelmed by the responsibility of helping her child, or of being unable to do so; expressing a belief that autism is dietary related so only a diet intervention will really help, or that it is most important to her that the child makes eye contact, or learns the alphabet. The parent will have explicitly described/named her feeling/belief; it should not be necessary to infer from brief comments or non-verbal signals. This Detailed expression may be spontaneous or may be in response to therapist exploration of what they first said.

Remember this is evaluating how clearly the parent’s feeling/belief is expressed, rather than how strong the feeling/belief itself is.

As an observer you are confident from what the parent has said that you have a very good understanding of exactly what the parent is feeling/believing/thinking and/or how she feels it impacts on her child.

Examples
Detailed expression of a feeling

Therapist: Are you enjoying the play now as well?
Parent: Yeah, yeah, yeah definitely yeah. It’s my time with [child] and it’s a constructive way of... I’m not a type of person to just sit around, I like doing things, so I enjoy playing, I'm not afraid of playing with his toys anymore, I'm not afraid to play with him, no I just enjoy that

Detailed expression of a belief

Parent: Well it’s just cos it’s like a game and rough and tumble, I’m not really feeling like he’s learning anything
Therapist: OK
Parent: So because it’s like a play fun thing, it’s not him learning, yeah
Therapist: Right, OK
Parent: I know that’s interaction and fun...
Therapist: yeah
Parent: but I don’t really feel like... it’s not doing anything.

Reasonably Detailed: To be considered a Reasonably Detailed self-disclosure the parent will have given a good indication of their personal feelings/beliefs etc., either verbally or by very clear non-verbal communication signals. However they will not have gone into much detail and/or explained why they feel/believe/think it or how they feel that impacts on their interaction with the child/engagement with therapy. The lack of expansion may be either because the therapist has not followed the disclosure up or because the parent has not responded to therapist attempts to explore further.

As an observer the parent has said enough for you to have gained some insight into the parent’s personal feelings/beliefs but this has not been expanded on and you have got the impression that more might have been said to help the therapist understand the parent’s perspective. You cannot be confident about how the parent thinks these feelings/beliefs impact on the child or why they are thinking/feeling it.

Examples

Reasonably detailed expression of a feeling

Giving indication of feelings of stress and rejection but not expanded on

Parent: I get really uptight when he’s just like that all the time, you know...
Therapist: Yeah
Parent: And I think as well it was like the rejection...
Therapist: Mm.

Reasonably detailed expression of a feeling and belief

Expressing a belief in the importance of more formal learning and personal responsibility to teach child

Parent: Because it’s... all right, he’s only got me there at home, and I know there’s nursery but it’s just sort of you just think well the only way, only you’re gonna get him to do puzzles or sit down with you and do stuff.

Limited Detail: To be considered a Limited Detail self-disclosure the parent will have given some hint of their feelings/beliefs but not discussed these explicitly – for example it may have been a brief comment or throw-away remark that is not then expanded on or explored at all, or a non-
verbal communication such as a sigh. You have to infer what the parent may be trying to disclose from what little they have said and/or from their non-verbal communication. This would include occasions where a parent gives a minimal ‘mmm’ or ‘yeah’ in response to a therapist’s suggestion e.g. ‘that must be hard on you’, or when potential disagreement with the therapist is indicated by non-verbal communication but not verbally expressed, e.g. in response to the therapist saying ‘the research is clear that MMR doesn’t cause autism’. Instances where verbal and non-verbal signals conflict – for example the parent says they feel fine about something but their non-verbals seem to indicate otherwise - would be scored as Limited.

As an observer you can only make inferences about the parent’s possible feelings/beliefs from what little they have said/their non-verbal signals – they have not been explicitly expressed.

**Examples**

**Limited expression of feelings**

Hinting at a feeling of boredom? /frustration? /being used by child?

*Parent:* Just do it again, that’s all I get [from child]

Hinting at it all being stressful for her too

*Parent:* It makes life a little less stressful. For him at least [laugh]

**No Detail:** To be considered a no detail self-disclosure the parent will not have expressed her feelings or beliefs etc. in response to specific therapist probes or comments about these. If the therapist has suggested something e.g. ‘that must be hard on you’, the parent will not have given a discernible reaction. As an observer you cannot tell whether the parent agrees with the therapist conjecture about her feelings or beliefs etc. or not.
Expression of Parent Perspective

Parent Self Disclosures - Scoring

Whilst viewing the video make a judgement of each relevant section of dialogue as No Detail, Limited Detail, Reasonably Detailed or Detailed expression and keep a tally on the record form.

If wavering between two definitions always score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly No Detail: The parent rarely makes a self-disclosure even when prompted and those few that are given are Limited Detail. There are no examples of the parent giving a Reasonably Detailed or Detailed self-disclosure; these would warrant raising the score by one point. This is a session where, when parent self is the focus of discussion, the only comments about the parent’s self and its possible impact come from therapist suggestions with very little reaction from the parent. As an observer you have no real idea about what the parent feels/believes/thinks about herself, of the parent’s feelings or how/whether they feel it impacts on their interaction with the child/engagement with therapy.

2. No Detail – Limited Detail: The parent gives mostly No Detail and Limited detail self-disclosures in roughly equal proportions. There may be the occasional example of a Reasonably Detailed self-disclosure but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. There are no examples of the parent giving a detailed self-disclosure; this would warrant raising the score by one point. This is a session where, when parent self is the focus of discussion, the parent gives limited insight into themselves at least some of the time. As an observer you can sometimes make inferences about what the parent feels/believes/thinks about herself but you cannot be confident about these or about how/whether they feel it impacts on their interaction with the child/engagement with therapy.

3. Mostly Limited Detail: The parent gives mostly Limited Detail self-disclosures. There may be examples where either a No Detail interpretation or a Reasonably Detailed/Detailed interpretation is given but these are not characteristic of the session and are not of sufficient frequency to warrant lowering or raising the overall score. There are no examples of the parent giving a Detailed self-disclosure. This is a session where, when parent self is the focus of discussion, the parent is consistently giving some insight into herself. However it is rarely expressed in an explicit way. As an observer you can usually make inferences about what the parent feels/believes/thinks about herself but cannot be confident about these or about how/whether they feel it impacts on their interaction with the child/engagement with therapy.
4. **Limited Detail-Reasonably Detailed**: The parent gives mostly Limited Detail and Reasonably Detailed self-disclosures in roughly equal proportions. There may be occasional examples of either a No Detail self-disclosure or a Detailed self-disclosure but these are not characteristic of the session and are not of sufficient frequency to warrant lowering or raising the overall score. This is a session where, when parent self is the focus of discussion, the parent gives some definite disclosures about herself but they are rarely fully explained and are equally often only indicated in a limited way. As an observer you sometimes have a good idea what the parent feels/believes/thinks about herself, though you do not know it in detail or know how she feels it impacts on her interaction with the child/engagement with therapy, but equally the rest of the time you can only make inferences.

5. **Mostly Reasonably Detailed**: The parent gives mostly Reasonably Detailed self-disclosures. There may be examples of Limited Detail or Detailed self-disclosures but these are not characteristic of the session and not of sufficient frequency to warrant either lowering or raising the overall score. This is a session where, when parent self is the focus of discussion, the parent consistently gives verbal disclosures about herself but these are rarely fully explained or explored in depth. As an observer you have a good indication of what the parent feels/believes/thinks about herself most of the time but rarely in any detail, and rarely do you know how she feels it impacts on her interaction with her child/engagement with therapy.

6. **Reasonably Detailed-Detailed**: The parent gives mostly Reasonably Detailed and Detailed self-disclosures in roughly equal proportions. There may be occasional examples of a Limited Detail self-disclosure but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where, when parent self is the focus of discussion, the parent is consistently giving verbal disclosures about herself, and explaining them in depth at least some of the time. As an observer you consistently have a good idea what the parent feels/believes/thinks about herself and some of the time you know this in detail, and know how she feels it impacts on her interaction with her child/engagement with therapy.

7. **Mostly Detailed**: The parent gives mostly Detailed self-disclosures with some Reasonably Detailed self-disclosures. There may be occasional Limited detail self-disclosures but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where, when parent self is the focus of discussion, the parent is actively and consistently giving full and detailed disclosures about herself. As an observer you consistently and confidently know in detail what the parent feels/believes/thinks about herself and also how she feels it impacts on her interaction with her child/engagement with therapy.
Integration of Parent Perspective - Interpretation of Child

Descriptors

Well Integrated: Therapist fully acknowledges/ explores the parent’s interpretation and gives an indication of how it fits in with her own interpretation. Any agreement is clearly indicated through positive verbal language, expanding on what the parent has said or giving further examples, and the parent is given shared ownership of the interpretation by the use of comments such as ‘as you said’ or ‘as we just agreed’. Any differences in interpretation are openly discussed and some form of agreement negotiated, where both points of view are respected – this could be to agree to disagree, or to keep an open mind for the moment, or to accept either the parent’s or the therapist’s interpretation. The therapist clearly uses the parent’s interpretation and/or parent’s and therapist’s negotiated agreed interpretation in the continuing discussion/negotiation of strategies.

Partially Integrated: The therapist listens to and acknowledges the parent’s interpretation and may briefly explore it. Agreement may be indicated; however if the parent’s interpretation differs from the therapist’s the differences are not fully and openly discussed and negotiated. Instead the therapist (as expert) attempts to persuade the parent round to her own point of view without any real negotiation. The parent may accept this but as an observer it is either difficult to tell whether they really have agreed or perhaps there is a sense of the parent still disagreeing but going along with it. Although the therapist has given an initial impression of taking the parent’s interpretation into account the parent’s interpretation is not then clearly used in the ongoing discussion/negotiation of strategies. Examples where the therapist acknowledges an interpretation or a difference in opinion but explicitly puts off discussion till another session would be coded as partially integrated.

Not Integrated: The therapist may acknowledge the parent’s interpretation briefly (e.g. nod, jokey remark, writing it down without comment) but either ignores or dismisses and returns to her own agenda, thereby giving the observer the impression that she considers the parent’s interpretation irrelevant or wrong, or she ‘corrects’ the parent, presenting her own view as the expert one. If the therapist writes down the interpretation and explicitly returns to it later in the session (e.g. ‘you said earlier...) this would raise the score for that episode to either Partial/Well Integrated according to the definitions above.

There is no attempt at negotiation of interpretations or even persuasion; the parent’s interpretation is effectively dismissed and is not used in the ongoing discussions/development of strategies.
Integration of Parent Perspective- Interpretation of Child - Scoring

Whilst viewing the video make judgements of the extent to which the therapist integrates the parent’s various interpretations into the session and keep a tally on the record form. Bear in mind that integration may occur at any point during the session, and may include referring back to/using earlier parental interpretations at later points in the session.

If wavering between two definitions always score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

If wavering between two descriptions always score the lower one.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly Not Integrated: The therapist mostly does not integrate the parent’s interpretations of the child into the session. There may be the occasional examples of partial or full integration of the parent’s interpretations but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. This is a session where the therapist only briefly acknowledges the parent’s interpretations or fails to acknowledge them, then dismisses them, using her own interpretations to guide the ongoing session.

2. Partially – Not Integrated: The therapist sometimes partially integrates but equally sometimes does not integrate the parent’s interpretations of the child into the session. There may be the occasional examples of a full integration of the parent’s interpretation but these are not characteristic of the session and not of sufficient frequency to warrant raising the overall score. This is a session where the therapist sometimes acknowledges the parent’s interpretations but despite possibly giving an initial impression of integration does not in fact use them to guide ongoing discussions – instead there is a tendency to either retain ownership of agreed interpretations for herself as expert and/or to attempt to persuade the parent to agree with her own interpretation without any real negotiation. Equally the therapist sometimes only briefly acknowledges or fails to acknowledge the parent’s interpretations, then dismisses them, using her own interpretations to guide the ongoing session.

3. Mostly Partially Integrated: The therapist mostly partially integrates the parent’s interpretations of the child into the session. There may be examples of the therapist fully integrating or not integrating the parent’s interpretation but these are not characteristic of the session and are not of sufficient frequency to warrant raising or lowering the overall score. This is a session where the therapist does acknowledge the parent’s interpretations but despite possibly giving an initial impression of integration does not in fact then use them to guide ongoing discussions – instead there is a tendency to either retain ownership of agreed interpretations for
herself as expert and/or to attempt to persuade the parent to agree with her own interpretation without any real negotiation.

4. **Well-Partially Integrated:** The therapist sometimes fully integrates and equally sometimes partially integrates the parent’s interpretations of the child into the session. There may be the occasional example where the parent’s interpretation is not integrated but this is not characteristic of the session and is not of sufficient frequency to warrant lowering the score. This is a session where the therapist acknowledges the parent’s interpretations and sometimes clearly uses them to guide ongoing discussions, sharing ownership of agreed interpretations and negotiating differences in opinion, but equally at other times fails to clearly use them, and/or retains ownership of agreed interpretations for herself as expert and/or attempts to persuade the parent to agree with her own interpretation without any real negotiation.

5. **Mostly Well Integrated:** The therapist mostly fully integrates the parent’s interpretations of the child into the session. There may be examples where the parent’s interpretation is only partially integrated or not integrated but these are not characteristic of the session and not of sufficient frequency to warrant lowering the overall score. This is a session where the therapist is consistently acknowledging and exploring the parent’s interpretations of the child and clearly using them in ongoing discussions, sharing ownership of agreed interpretations and negotiating any differences in opinion.
Integration of Parent Perspective - Parent Actions and Strategies

Descriptors

Well Integrated: The therapist fully acknowledges and explores the parent’s reflection on/ explanation of her actions/own strategies and gives an indication of how these fit in with her own views. Agreement on the effect of the parent’s actions on the child and/or the reasoning behind the parent’s actions is clearly indicated through positive verbal language, expanding on what the parent has said or giving further examples. Any differences in opinion are openly discussed and some form of agreement negotiated, where both points of view are respected – this could be to agree to disagree, or to keep an open mind for the moment, or to accept either the parent’s or the therapist’s viewpoint. The parent’s reflections and/or the parent’s and therapist’s negotiated agreement are clearly used in the continuing discussion.

Similarly the therapist fully acknowledges/ explores the parent’s reactions to her suggested strategies/advice. Any potential misunderstanding of the strategy is cleared up. If the parent’s reaction is positive the therapist builds on this, working towards shared ownership of the strategy, perhaps using the parent’s words rather than her own and/or encouraging her to lead any ongoing discussion about the strategy. Any disagreement or reservations the parent has expressed are openly discussed and some form of agreement on how to proceed, where both points of view are respected, is negotiated. This may be an agreement that the parent will try the strategy/advice and monitor its effectiveness and/or the strategy/advice may be modified in some way to take account of the parent’s reaction. Thus the parent’s reaction guides the negotiation of strategies and/or the therapist clearly adapts the strategies and/or the way they are presented to accommodate the parent’s reaction.

Partially Integrated: The therapist listens to and acknowledges the parent’s reflection/explanation of her own actions/strategies and may explore it. Agreement may be indicated, however, if the parent’s reasoning or opinion on the effect of her actions on the child differs from the therapist’s, the differences are not fully and openly discussed and negotiated. Instead the therapist (as expert) attempts to persuade the parent round to her own point of view without any real effort to give the parent shared ownership of it, for example by using the parent’s words or letting her now lead the on-going discussion about the strategy; instead there is a sense that the strategy/advice belongs to the therapist as expert. If the parent has expressed disagreement or reservations there is an impression of the therapist (as expert), although acknowledging the parent’s reaction, attempting to persuade the parent to accept the strategy/advice without any
real negotiation between them. Although there may have been an initial impression of interest in the parent’s reaction being taken, the therapist does not in fact negotiate or change their advice/strategy, or the way they are presenting it, to accommodate the parent’s reaction.

**Not Integrated:** The therapist may listen to and acknowledge the parent’s reflection/explanation of her actions/own strategies briefly (e.g. nod, write it down without comment) but either ignores or dismisses it and returns to her own agenda, thereby giving the observer the impression that she considers the parent’s reasoning or view of the effect on the child irrelevant or wrong, or she ‘corrects’ the parent, presenting her own view as the expert one. There is no attempt at negotiation of opinions or even persuasion; the parent’s reflection/explanation is effectively ignored and the therapist’s opinion guides the ongoing discussion and the development of strategies.

Similarly the therapist may acknowledge the parent’s reaction briefly (e.g. nod, brief comment, writing it down without comment) but either ignores or dismisses it and returns to her own agenda, thereby giving the impression that she considers the parent’s reaction wrong or irrelevant, or she ‘corrects’ the parent, presenting her own view on the strategy/advice as the expert one. The therapist gives no real impression that the parent’s reaction is valued; there is no real attempt at negotiation or even persuasion; the parent’s reaction is effectively ignored and the therapist does not adapt her strategy/advice accommodate the parent’s reaction.
Integration of Parent Perspective - Parent Actions and Strategies

Scoring

Whilst viewing the video make judgements of the extent to which the therapist integrates the parent’s various reactions into the session and keep a tally on the record form. Bear in mind that integration may occur at any point during the session, and may include referring back to/ using earlier parental reactions at later points in the session.

If wavering between two definitions always score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

If wavering between two descriptions always score the lower one.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly Not Integrated: The therapist mostly does not integrate the parent’s reflections/explanations of her actions/own strategies and/or reactions to the therapist’s suggested strategies into the session. There may be examples of partial or well integrated parent perspectives but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. This is a session where the therapist only briefly acknowledges the parent’s reflections/explanations or fails to acknowledge them, then dismisses them, using her own opinions to guide the ongoing session. Similarly when the parent gives a reaction to a therapist strategy/advice the therapist consistently either dismisses or corrects any negative reaction and/or maintains ownership of the strategy where the reaction was positive. The therapist consistently presents her strategies and advice as the expert ones, not to be negotiated.

2. Partially – Not Integrated: The therapist sometimes partially integrates but equally sometimes does not integrate the parent’s reflections/explanations of her actions/own strategies and/or her reactions to the therapist’s suggested advice стратегий into the session. There may be examples of a well-integrated parent perspective but these are not characteristic of the session and are not of sufficient frequency to warrant raising the overall score. This is a session where the therapist sometimes acknowledges the parent’s reflections/explanations but despite possibly giving an initial impression of integration does not in fact use them to guide ongoing discussions – instead there is a tendency to attempt to persuade the parent to her own point of view without real negotiation. Equally the therapist sometimes only briefly acknowledges or fails to acknowledge the parent’s reflections/explanations, then dismisses them, using her own opinions to guide the ongoing session. Similarly when the parent gives a reaction to a therapist strategy/advice, the therapist sometimes acknowledges and explores it, but then attempts to persuade the parent to her own expert point of view without any real negotiation. Equally the therapist sometimes
dismisses the reaction or corrects the parent, presenting her view as the expert one, not to be negotiated.

3. **Mostly Partially Integrated:** The therapist mostly partially integrates the parent’s reflection/explanation of her actions/own strategies and/or reactions to the therapist’s strategies/advice into the session. There may be examples of a well-integrated parent perspective or one that is not integrated but these are not characteristic of the session and are not of sufficient frequency to warrant raising or lowering the overall score. This is a session where the therapist does acknowledge the parent’s reflections/explanations but despite possibly giving an initial impression of integration does not in fact use them to guide ongoing discussions – instead there is a tendency to attempt to persuade the parent to agree with her own view on the actions/strategies without any real negotiation. Similarly when the parent gives a reaction to a therapist strategy/advice, the therapist consistently acknowledges the reaction. However she then either attempts to persuade the parent to accept her strategy/advice without any real exploration, negotiation or modification to take account of the parent’s views, or maintains ownership of any agreed strategy or advice.

4. **Well-Partially Integrated:** The therapist sometimes integrates well but equally sometimes only partially integrates the parent’s reflection/explanation of her actions and/or her reactions to the therapists suggested strategies/advice into the session. There may be examples where the parent’s perspective is not integrated but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where the therapist acknowledges the parent’s reflections/explanations and sometimes uses them to guide ongoing discussions, negotiating any differences in opinion, but equally at other times attempts to persuade the parent to agree with her own opinions on the usefulness and effect of the parent’s actions/own strategies without any real negotiation. Similarly when the parent gives a reaction to a therapist strategy/advice the therapist sometimes takes this reaction into account, negotiating an agreed way forward, modifying her advice if appropriate, and sharing ownership of agreed strategies/advice. However equally at other times the therapist instead either attempts to persuade the parent to accept her strategy/advice without any real exploration, negotiation or modification to take account of the parent’s views, or maintains ownership of any agreed strategy or advice.

5. **Mostly Well Integrated:** The therapist mostly integrates well the parent’s reflection/explanation of her actions and/or reactions to the therapist’s suggested strategies/advice into the session. There may be examples where the parent’s perspective is only partially integrated or not integrated but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where the therapist is consistently acknowledging and exploring the parent’s reflection/explanation of her actions/own strategies and using them to guide ongoing discussions, negotiating any differences in opinion. Similarly when the parent gives a reaction to a strategy/advice, the therapist is consistently taking this reaction into account, negotiating an agreed way forward, modifying her advice if appropriate, and sharing ownership of agreed strategies/advice.
Integration of Parent Perspective - Parent Self Disclosures

Descriptors

**Well Integrated:** The therapist fully acknowledges/explores the parent’s disclosure and shows appropriate empathy for emotional disclosures and/or respect for beliefs. Where relevant the therapist demonstrates to the parent that she has valued the disclosure by clearly taking it into account in ongoing discussions in a sensitive manner – for example if the parent discloses feeling overwhelmed the therapist may reduce the demands of the session/home practice, or if she discloses a lack of confidence in her ability to help her child the therapist will use techniques to help develop her belief in her abilities throughout the session. This may involve the therapist referring back to the disclosure at later points in the session.

**Partially Integrated:** The therapist listens to and acknowledges the parent’s disclosure and may explore it. However the therapist shows only limited empathy/respect and/or only takes account of the disclosure in a limited way in ongoing discussions. Attempts by the therapist to problem solve for the parent without showing a real empathy/understanding of her disclosure would be scored as Partially Integrated.

**Not Integrated:** The therapist may acknowledge the parent’s disclosure briefly (e.g. nod, jokey remark, writing it down without comment) but does not explore it and quickly dismisses/returns to her own agenda. The therapist shows a lack of real empathy or respect for the parent’s disclosure and/or an unwillingness to explore it and take account of it in the ongoing session. If the therapist writes it down but then refers back to it later in the session then the later episode should be scored as Partial or Well Integrated according to the definitions above and the original Not Integrated tally ignored.
Integration of Parent Perspective - Parent Self Disclosures

Scoring

Whilst viewing the video make judgements of the extent to which the therapist integrates the parent’s various self-disclosures into the session and keep a tally on the record form. Bear in mind that integration may occur at any point during the session, and may include referring back to/using earlier parental self-disclosures at later points in the session.

If wavering between two definitions always score the lower one.

At the end of the video use these tallies to assist in making a judgement of an overall score for the session. The final evaluation should not be based on a simple count of the tallies but should also take account of the observer’s overall impression of the session based on the descriptions below.

If wavering between two descriptions always score the lower one.

‘Mostly’ = judged to be approximately 65% of the time or more;

‘Some’ = judged to be approximately 20-35% of the interpretations

‘Not of sufficient frequency’ = judged to be less than 20% of interpretations

1. Mostly Not Integrated: The therapist mostly does not integrate the parent’s self-disclosures into the session. There may be examples of partially or well integrated disclosures but these are not characteristic of the session and are not of sufficient frequency to warrant raising the score. This is a session where, when the parent gives a self-disclosure, the therapist consistently only briefly acknowledges it and rarely shows appropriate empathy and/or respect. The therapist does not adjust the delivery of the session to take account of the disclosure.

2. Partially – Not Integrated: The therapist sometimes partially integrates the parent’s self-disclosures but equally at other times does not integrate them. There may be examples of full integration but these are not characteristic of the session and are not of sufficient frequency to warrant raising the score. This is a session where the therapist sometimes listens to and acknowledges the parent’s self-disclosure, showing limited empathy/respect and/or only taking account of the disclosure in a limited way in the on-going session. Equally at other times the therapist only briefly acknowledges or ignores the disclosure, showing no empathy/respect and making no adjustments to the delivery of the session to take the disclosure into account.

3. Mostly Partially Integrated: The therapist mostly partially integrates parent’s self-disclosures into the session. There may be examples of a well integrated disclosure or one that is not integrated but these are not characteristic of the session and are not of sufficient frequency to warrant raising or lowering the score. This is a session where the therapist usually listens to and acknowledges the parent’s disclosures but consistently either only shows limited empathy and respect or only takes limited account of the disclosure in the on-going session.

4. Well-Partially Integrated: The therapist sometimes integrates well parent self-disclosures into the session but equally sometimes only partially integrates them. There may be examples of a disclosure not being integrated but these are not characteristic of the session and are not of
sufficient frequency to warrant lowering the overall score. This is a session where the therapist usually acknowledges parent disclosures, showing empathy and respect and sometimes adjusts her delivery of the session to take account of them. Equally sometimes either only limited empathy/respect is shown or the therapist only takes account of the disclosure in a limited way in the on-going session.

5. *Mostly Well Integrated:* The therapist mostly integrates well parent self-disclosures into the session. There may be examples where disclosures are only partially integrated or not integrated but these are not characteristic of the session and are not of sufficient frequency to warrant lowering the overall score. This is a session where, once parent disclosures have been made, the therapist consistently shows clear empathy and respect and continually adjusts her delivery of the session to take account of the disclosure as appropriate.
Time

In this domain judge the proportion of time spent on dialogue about each theme according to the following definitions:

1. Very little or None

Less than 5% of the session is judged to have been devoted to dialogue on this theme. Although there may have been a few sections of dialogue on this theme discussion will have been very brief.

2. A Little

Between 5% and 20% of the session is judged to have been devoted to dialogue on this theme. There will have been discussions on this theme a few times in the session, perhaps occasionally even in some length, but it will not have been a main focus of the dialogue.

3. Quite a Lot

Between 20% and 40% of the session is judged to have been devoted to dialogue on this theme. Discussion of this theme will have formed a significant part of the session, probably alongside other themes.

4. A Lot

More than 40% of the session is judged to have been devoted to dialogue on this theme. Discussion of this theme will have formed a major part the session, dominating it in some cases.

Remember sessions usually contain dialogue which is not being coded under the three themes and it is not necessary for the time scores to represent 100%. Some sessions may for example contain lots of discussion on other issues such that the 3 themes all score only 2 or 1. Similarly if there is a lot of unscored distraction in the session this will be reflected in lower time scores. On the other hand it should be clear that certain combinations of scores will not be possible – there cannot be more than 2 themes scoring a 4 in one session.